THE

Journal *of* Home Economics

For those interested in Homemaking
Institution Management, and Educational Work in Home Economics

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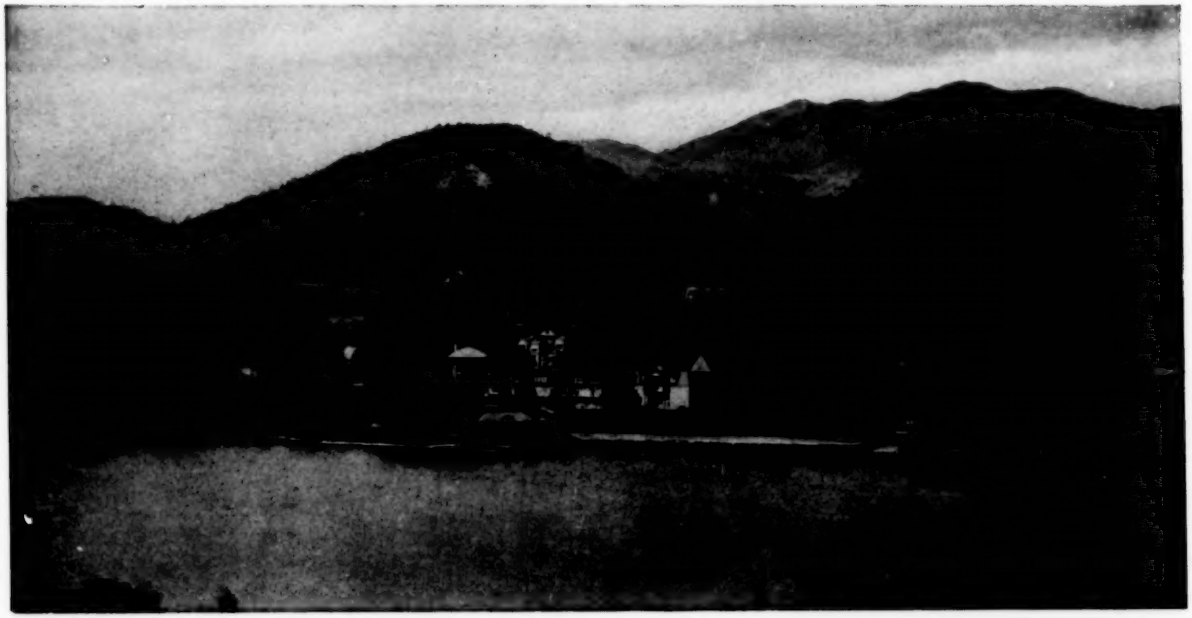


Lake Placid Club

Lakeside, oldest of the four clubhouses

THE
Journal of Home Economics

VOL. VII MARCH, 1915 No. 3

FOREWORD

SARAH LOUISE ARNOLD

Dean of Simmons College, Boston, Mass.

In this number the JOURNAL OF HOME ECONOMICS presents a report of the proceedings of that section of the American Home Economics Association that gives specific attention to the administration of institutions.

A word of introduction may be needed for readers who have been accustomed to think in terms of the private home when discussing the subject called Home Economics. As society is constituted today, the private home does not suffice the triple needs of humanity: food, clothing, and shelter. Thousands of children spend their early years in homes provided by the state or by philanthropy—homes more or less public and often far removed from the ideal. All of us are glad to take shelter in the warm room of the modern hotel. Many of us have profited by the home attached to the school or the college in which we were educated. Communities are obliged to establish homes for the sick, for the unfortunate, for the criminal, and for the defective.

The institution becomes then a matter of common interest. If the public has not learned to measure the needs of the institution, is it not time that this should be done? If society must provide food, clothing, and shelter for orphaned children, for the poor, for the defective, for the wayward or the criminal, is it not incumbent upon the intelligent members of society to understand the type of institution that can best be adjusted to the needs of these various groups?

The general reader, therefore, is urged to reflect on the subject matter offered here, noting that the work of the institution is not

far removed from the work of the private home, and recognizing that the community will profit by a clearer understanding of the problems that the Institution Section of the American Home Economics Association is trying to solve.

Many readers may be interested to know that the Institution Section is really the parent of the American Home Economics Association, as well as its daughter, the Lake Placid Conference being the beginning of the American Home Economics Association. At present a large and important group of the members of the association are endeavoring to secure better living conditions in institutions. The members of this group are studying all the problems of nutrition, sanitation, and expenditure, from the point of view of the institution. They are anxious to learn how the home for the many can be made wholesome, comfortable, serviceable, economical, and reliable.

Several schools and colleges are attempting to provide courses of instruction in institution economics. Notable examples of this attempt may be found at Teachers College in New York, Simmons College in Boston, Mechanics Institute in Rochester, New York, Pratt Institute in Brooklyn, Chicago University, and Cornell University. For the classes no text-books can be found except such as have been compiled by the Institution Section. For the time being, therefore, the reports of the proceedings of this section have a very definite value. As the years go on, as the material is properly assorted and tested, and as our experience increases, formal texts and formidable volumes will take the place of these simple records. Until that time, all students of institutional problems will do well to secure the records of the annual meetings of the Institution Section.

On another page of this issue appears a list of the reports and JOURNALS containing papers that have been presented at earlier meetings. The reader will also find the announcement of the 1915 meeting of the section, which will be held once more at the Lake Placid Club, at the invitation of Mr. and Mrs. Dewey.

We heartily urge all who are interested in the problems of the larger housekeeping to attend the meeting. No one ever enjoys the privilege of one of the Lake Placid meetings without promising himself a repetition of the pleasure.

ADDRESS OF WELCOME

GODFREY DEWEY

Secretary, Lake Placid Club

It is a great pleasure to welcome you here at this time. There are many present who have been here in other years, and to whom the Lake Placid Club is an old and familiar story; but there are many others here to whom this is the first glimpse of Lake Placid and the club, and to whom a word of introduction and explanation of the aims of the club may not be amiss.

The idea of the club was born long before the physical plant took shape, or substance, or even name. Its birth was brought about by the realization that the increasing pressure of American life was making it essential for the world's best workers to get the greatest possible amount of life, strength, comfort, and recreation, out of their annual or occasional vacations. After years of search for the right place in which to develop the idea of the club, Lake Placid was selected in 1893 as the spot on the American continent best suited for working out the plans of the founders.

We have come far from the first year of the organization of the club in 1895. At that time there were only thirty persons on five acres of land, and they were housed in one building, which has now been lost in the heart of this Lakeside Club House. In August last year there were nine hundred guests here at one time; and it is a far cry from the evening when the club council sat in grave deliberation over the wisdom of installing a second bathtub for the plant, and decided against it as an unjustified extravagance, to to-day when there are over three hundred bathrooms on the premises.

To-day the plant comprises something over six thousand acres, stretching for a distance of perhaps ten miles. It comprises over two hundred and sixty buildings, large and small; twenty-seven farms in five or six groups; shops; mills; and accessory departments of every description. The plant has grown to be almost a little self-contained world, not from the choice or the desire of the founders for expansion, but from necessity caused by the growth of the club.

The business organization of the club is called the Lake Placid Company. It is a New York stock corporation with $100,000 worth of controlling common stock in the hands of trustees, with bonded

indebtedness to the amount of $500,000, and with $500,000 worth of preferred stock scattered among the members of the club. The company is the legal organization. It assumes all liability and owns and operates the plant for the club members. All the departments with which the members come in contact, except the department in charge of rooms, are administered by departmental heads who are pledged to spend the total receipts in making their departments the best possible according to their ability. The company takes the room rental, and with that money operates and adds to the entire estate. All the departments, with this one exception, are placed on a coöperative basis, but without the individual liability that coöperation so often implies. No club member, as such, is liable for anything but the bills that he himself incurs.

The social organization is represented by the club council, which is elected annually by and from the club members. To this council are referred questions of membership, house rules of the club, and like matters. The members of this council, however, have no legal responsibility other than that for their personal expenses.

What are the aims of this organization? The first aim is best expressed in the opening sentence of the general circular of the club. It is as follows:

> The object of Lake Placid Club is by coöperation to secure among congenial people and beautiful natural surroundings the advantages of an ideal vacation or permanent country home, the highest standards of health, comfort, rest, and attractive recreations, both summer and winter, at as moderate cost as is consistent with high standards.

The next aim is to work out the best standards for health and comfort, to make of this plant a great experimental laboratory for the working out of these standards, and to share the results freely with others who are interested. Besides the aim to make of this a laboratory or an experiment station, there is a desire to make it a training school from which persons may go out to spread the standards learned here and to guide other persons in their work. It is a hope of the club to make this a center for conferences of workers who need an ideal meeting place in order to obtain the best results.

WASTE

MARY URI WATSON

MacDonald Institute, Guelph, Ontario

The committee on waste decided to limit its work this year to the question of food waste. A questionnaire concerning this subject was sent out to members of the association, and a brief summary of the answers to these questions follows:

The first question was: "Does your institution use any means other than garbage inspection to control or prevent the waste of food?" The most important factors in the control of waste, according to the answers, are the interest and the everlasting vigilance of the manager of the institution and his or her power to interest subordinates in the subject. The work of controlling food waste may be delegated to subordinates, but it will not be effective if keen interest in it does not emanate from the manager, and if he or she is not in sympathy with the work. There are various methods of controlling food waste given in these answers. Close calculation of supplies needed was emphasized by many. The planning of menus and the calculation of precise quantities to exactly serve the required number of portions was another method. Careful buying was emphasized. Another method was careful calculation of quantities so that only the food necessary for each meal should be cooked. Another method of obtaining the same result was by using a system of requisitions for all supplies furnished to the kitchen and the other departments. In some cases, daily inventories of refrigerators and storerooms were made before the requisitions for the next day were made out. In one institution the portions of food were measured. In most of the answers the constant watch of the plates was mentioned. Unpopular dishes, careless preparation and wasteful service are discovered in this way. A certain dish may be unpopular because of lack of seasoning, or it may have other objectionable features. In some institutions unserved foods that may have been sent to the dining rooms or other serving rooms for individual or family service are carefully collected so that they may not be spoiled for later use. In one institution the served dishes are collected on one central table and the chef decides which can be used and which have to be put out. Another method of controlling waste is by a thorough inspection of the refuse collected from serving

dishes and from plates. Another method used which has apparently been well tested in one or two places, is the written daily report of garbage or waste inspection. In one answer attention is called to the employing of competent skilled labor as a means of controlling waste, and in another to the need for departmental heads who are able to train subordinates to the needs of the particular institution.

The next question was: "What use is made of left-over bread, cake, butter and the like?" There was great uniformity about the answers. Most of the left-over bread, cake, and so forth, is used. Usually left-overs are used in the preparation of meals. Occasionally institutions sell left-overs, and occasionally they give them to homes or charitable institutions. Sometimes garbage is given to any company that will pay for the cost of transportation. Occasionally a bargain is made by which grease and bones are sold by the pound and by which the company buying them agrees to remove garbage. The agricultural colleges and institutions which have farms in connection with them are fortunate in that they may transform all their waste into live stock or poultry. This, in some cases, adds revenue to the institution.

The next question was: "Have special recipes for the use of left-overs been worked out in your institution? If so, can copies be obtained?" In the forty or more answers to the questionnaire, there were but four touching on this question. One or two recipes, which may be new to some, were given in the replies to this question, and others a few of which may be obtained, were mentioned. One matron reports that she is compiling a cook book of recipes for 500 portions.

The next question was: "Does your institution use printed or written directions to govern the collection or disposal of food waste or garbage?" There was a very curious lack of printed or written directions in the answers for this work. Only one person reports the use of typewritten directions for part of this work. One manager is now formulating such directions. Probably some of the lack is due to the fact that many institutions have to employ illiterate help for whom written directions would be useless. Here is a field wherein the members of the association may do some good work if they will coöperate. The training schools have already proved the value of printed directions for mechanical work. The use of written directions does not eliminate the necessity of using intelligence and judgment, but it does prevent misunderstandings with regard to processes of

handling. Our own institution has more than proved the value of printed instruction in the training of students.

The next question was: "What special arrangement does your institution make to facilitate the collection of left-overs and refuse, or its inspection and disposal?" One manager reports that it is one man's business to empty, wash, sterilize, and replace the garbage cans daily at a specified time; that is, one man is responsible for the state of the garbage receptacles. Another reports the use of special trucks with garbage cans underneath. Soiled dishes are collected, scraped and stacked on these trucks. It was not stated whether this truck is simply a scraping table on wheels with a rubber cover around the hole, over the garbage can, or whether it is simply an ordinary truck on wheels with a can underneath. A scraping table with a rubber cover around a hole over a garbage can and with room enough around that hole for the stacks of plates, would be very satisfactory for use in large institutions and in institutions where the service would permit the rolling of the trucks. Such tables might be used advantageously in institutions that give family service and in institutions where all the residents enter and leave the dining room at the same time. Another manager reports the collection of the serving dishes at a central table. Another reports the use of separate receptacles for the different left-overs of food, in order to prevent mixing them so that they cannot be used again. One reports the use of separate receptacles for different kinds of bread scraps, one for whole slices of bread that may be used for toasting or serving, another for loaf ends and crumbs from the cutting table, and a third for broken bits, which in this case went to the poultry department of the farm. Another manager reports the practice of keeping garbage cans in cold storage. In this institution garbage was evidently disposed of once a day, and in the interval garbage cans were kept in cold storage to prevent food souring in them, to keep them from flies, and also to prevent the development of objectionable odors both in the food and in the cans.

The next question was: "What kind of garbage receptacles do you have?" The almost unanimous answer is galvanized iron, that much abused metal. The receptacles vary in capacity from eight quarts to thirty gallons, according to their location and to the system of garbage collection. A few managers report the use of white enamel receptacles but these are chiefly in hospitals. Some report the use of covered cans and some open cans. This appears to be a question

for careful discussion, the use of the open can versus the closed can. Some persons object to using the closed can, especially when it is kept in warm kitchens because foods ferment rapidly in it and because waste is kept out of sight in this way. Several persons report the use of patented receptacles, barrels made by the Dover Stamping Company, the Just Right cans, and the DeWitt cans. One lunch room manager reports the use of wire baskets with solid metal bottoms for the collection of paper wrappers in school lunch rooms. In one institution the question of a garbage can with a strainer bottom, which will strain the liquids from the solids of the garbage is being considered. In another institution the garbage receptacle used is a galvanized tub with an elevated double bottom for draining the liquid off. The lower part of this tub has an outlet with a stopper similar to that of a beer bottle. Such stopper is comparatively easily cleaned.

The next question dealt with the frequency of inspection, and the answers range from "when necessary" through "casual" and "irregular" up to "after every meal." In the majority of cases, however, there is daily inspection though it does not seem to be so well organized as some of the other methods of controlling food waste. In one or two institutions it is very thoroughly organized. A thorough system of inspection very quickly permeates an institution and has its effect in lessening waste, for if employes know that careful check is kept in small matters of waste, greater care is taken to lessen waste. The moment the inspection relaxes, care is likely to relax. Therefore, the matter must be continually brought to the minds of the employes.

The final question on the paper was: "Does your institution use an incinerator?" The use of an incinerator is reported in eight answers. There is, however, little information given as to the cost of installing incinerators, the size of the institutions using them, and the amount of waste consumed in specified time. The fuels used are gas and coal. One person reports that the cost of fuel is negligible because it is only needed in starting the operating of the incinerator. After the incinerator is started, it practically runs itself, for the burning of the material supplies the heat necessary for drying the wet garbage. Another person reports that the incinerator used in his institution heats water at the same time that refuse is burned; therefore the cost of the incinerator is offset by the heating of the water. One or two report that the cost of using gas incinerators is about 50 cents per

hundred pounds of wet garbage. One person doubts the advantages of incinerators in small institutions because of the cost of operating them. In one institution, according to the report made, incinerators were tried and abandoned because of the high cost of operation and because of inability to regulate the water heating attachment.

DISCUSSION OF MISS WATSON'S PAPER

Miss Eckman, The Massachusetts General Hospital. In our hospital we have seventeen wards. Twice daily an assistant inspects the garbage from the wards, the serving room and the kitchen. Each ward is provided with a twenty-quart galvanized iron pail. The pail is numbered or lettered according to the ward, and in the morning an assistant inspects the garbage from breakfast of that morning to supper of the night before. In a basement set aside for this purpose the cans are arranged side by side on a shelf. In the morning, a man whose duty it is to collect this garbage comes with his truck containing a number of barrels and the inspector protected with an outer garment stands by as he slowly pours the contents of these pails into the barrels. He calls the number or name of the ward while she looks to see what is in the pail, and decides whether there are things which should not be there, such as paper, glass, etc. Then the kitchen garbage is inspected in the same way. The receptacles for this garbage are barrels which have a capacity of about thirty gallons.

Miss Watson. There is a very valuable report of an address given by Mr. Pitcher at the meeting last May of the American Association of Officials of Charity and Correction. This report worked out in connection with Kings Park State Hospital, Long Island, was upon kitchen organization and administration, and the thing that will be especially interesting is the matter of close calculation of quantities for fixed numbers, for he has given here the standard basic dietary ration tables, very liberally worked out. It would be exceedingly useful to dietitians and people making close calculations for institutions.

Mr. Dewey. In the ten or twelve tons of waste burned in a Chicago hotel we have a cause of the high cost of food in the country, and an annual loss that would build some of the institutions in which you are working. The key to this whole problem is the elimination of waste, not only using garbage, but also stopping the waste that makes garbage. In one of our club houses we substituted a cook who insisted

on carving and serving large portions. People ate only half of it; it took only a short time to make a $1,000 waste.

Dr. Langworthy. You will find in bakers' journals and manuals recipes for using left-over cake dried and ground in place of part of the flour in making spice cake, gingerbread, etc. The uses of stale bread for bread pancakes, bread pudding, etc., are too well known to need mention.

Mr. Dewey. Ordinary hotel keepers are advocates of anti-economy. They vie with each other in conspicuous waste. There are hotels in which a guest gets two fresh sheets and two fresh pillow cases every day. The hotels vie with each other in the number of towels they can get into a room. A person goes into the average high-priced hotel and wants a little bit of steak and they serve him enough for a family of four or five. They get a class of people who rush to the highest priced hotel. The training of the average hotel man has been absolutely in the reverse direction from what we are working for. There is a sprinkling among the hotel men of people who are looking at this question in a broader way, and a more scientific spirit. The hotel interest today overshadows your churches and schools in the amount of money involved. Every little community has the hotel. The hotel men have their state and national associations. This is an age of training men for special work. I have been told recently by owners of large hotels that if I could find a man capable they would pay him any salary he chose to ask. There is an enormous demand for trained and educated people in the large hotels.

DORMITORY SUPERVISION

ELIZABETH MAY GOODRICH

Simmons College, Boston

The Committee on Dormitory Management has carried on its work during the months past with directors of dormitories in schools and colleges in various parts of the country and the work has been facilitated by the ready response with which our efforts to investigate certain lines have been received.

A list of the following topics was sent out to members of the committee, suggesting subjects for study:

1. *The Dormitory.* Service, care of rooms, laundry, trunks and storage, vacations, opening and closing of houses, care of equipment,

repairs, use of vacation, description of duties of house superintendent and her responsibilities in various positions, amount of equipment for fifty or one hundred students, and amount of replacement.

2. *Food.* Question of one large dining room or several small ones; proportion of servants to students served; number of tables, and persons accommodated at each; provision for care of dining room; provision for waiting on table; marketing and menus; storage of provisions; kitchen, serving-room and dining room; care and replacement of equipment.

From these topics they were asked to select five which seemed to them of greatest interest. The subjects chosen were put in the form of a questionnaire which followed.

The interest shown in these subjects may be indicated by some of the letters received. One person replied "It is most difficult to make a choice, each one is so interesting and so important." Another said that the duties of house superintendent would be of interest to all, since it was a topic it had not been her privilege to hear discussed at any of the meetings she had attended. And still another wrote:

> I am glad to be a member of this committee for the sake of help and enlightenment along these proposed lines, since many of the subjects are very important ones with us, as we have 250 to house and 450 girls, boys and servants to feed three times a day, and we are most anxious to gain knowledge and assistance in the studying and solving of this problem.

The subjects decided upon by the committee as a whole were: Care of rooms, laundry, care and replacement of equipment, marketing, duties and responsibilities of the house superintendent.

From information based on the questionnaire it was found that service was required for care of student rooms in only three out of twenty institutions. In all others, students cared for their own, with the exception of the weekly cleaning and general care. The rooms in most instances were inspected daily by the house director or her assistant. In one case it was done by the matron and in one other by an upper servant. The lowest per capita rate was 1 to 6, and the highest 1 to 11.

In regard to laundry. Only three out of the twenty had sufficient equipment to do the household laundry and it was therefore sent to commercial laundries. As the flat rate, $1\frac{1}{2}$ cents, was the same in a western university and an eastern college, the price appears to be uni-

form in different sections. One of the three where the laundry was done at the dormitory, was where there were four halls of residence, the laundry being done in each house entirely by hand, but they were trying out electrical equipment with the object of installing a plant that would take care of the whole amount from each house.

In nearly all cases some provision was made for students to do their own laundry, in a few instances without charge, but the usual charge was 5 cents per hour where they provided their own soap, etc. The exceptions to this were 50 cents per month in one college and $1 per year in another. One institution reported that students were allowed to wash in a lavatory where tubs were provided for the purpose and then go to a pressing room to iron, the charge being only for the rent of the iron.

In the care and replacement of equipment there was found to be no adequate method of estimating either the life or replacement of furnishings; one place, where oak furniture in students' rooms had been in use twenty years, reported that it was still in excellent condition; repairs had been made when necessary. It was also difficult to estimate the life of linen. Here again there seemed to be no definite method. In most instances the life of linen was from four to five years for bed linen and two and a half for towels. To keep up the supply one dormitory replaced one-fourth of the original stock each year. In another a sufficient supply was bought in 1910 and had not been added to until 1914 when they replaced the entire amount. Others purchased one new set each year. The charge for damage to building or equipment was in some cases only for "wanton carelessness" but in most of the others the charge covered cost of repairs or replacement.

Inventories were taken for furnishings once a year; for china, glass and silver at the end of each term, with very few exceptions.

Under the head of food. In the matter of contracts the reports showed a divided opinion. Some felt that where there might be a saving in price the quality was often doubtful. Others contracted for butter, eggs, canned goods and some groceries, and also meats successfully and advantageously, while still another stated that the economical value of contracts could not be rated too highly. To quote the wording of this report it was said:

> The time given to careful testing of different goods is repaid in economic saving, more fully than in any other labor. Where there were competitive bids by local dealers the need was felt of making use of contracts.

Quantities purchased always depended on storage and refrigeration which in most instances was inadequate.

One only reported a large store room for unpacked goods, a large pantry and a fine refrigerator of 4500 pounds capacity.

In regard to the buying of meats there was also a divided opinion between buying by the carcass and buying selected prices for particular needs.

The question of inventory of food consumed, food returned from the table, waste and per capita cost was regarded in most cases as an impossible task to do with any satisfaction or system. One reports that where there was no central dining hall and kitchen for four separate dormitories, to accurately work out this problem often enough to be of value would require the services of an extra worker. Another reported that inventories were taken from supplies purchased but no record was made of table waste. In still another institution, inventories of food and per capita cost were made daily from statements sent to office from kitchen, bakery and storeroom. All seemed interested in this subject, but gave nothing clearly defined in regard to it. It may be that the committee on waste has discovered some method that will prove valuable.

The duties of house superintendent were with few exceptions a supervision of all matters pertaining to the care of the house and the welfare of its occupants, for example, buying of equipment, food supplies, making of menus, employing help and scheduling the work, attending to repairs and replacements as needed. The exceptions were where care of house and dining room and kitchen department were carried on under separate heads, and where material duties and supervision of students' behavior were included. In reply to the question how far training was necessary for efficiency in dormitory management, it was generally conceded that service in this direction must be professional in order to give the greatest satisfaction.

In the digest of the questionnaire of which I have given you a brief summary, it is plainly evident that with all the work and thought which have already been given to matters in this line, there are still problems to be solved, and standards to be set which shall prove applicable to individual needs, and the committee recommends for your discussion the subjects of contracts, some uniform method for estimating the life of equipment, and for the inventory of food supplies in relation to consumption and waste.

SCHOOL LUNCHES

ALICE C. BOUGHTON

Superintendent of Elementary School Lunches, Philadelphia

The School Lunch Committee organized a symposium on school feeding for the Fourth International Congress on School Hygiene held in Buffalo, August 1913.

There were two sessions, morning and afternoon. At the morning session the papers and discussion centered on school feeding as a part of the School Hygiene Movement. There was a large attendance of physicians, nurses and teachers primarily interested in nutrition of school children.

At the afternoon session the papers and discussion dealt with the administrative side of the movement in elementary, secondary and rural schools. In addition some educational, social and economic aspects were elaborated.

The entire program is printed in the "Proceedings" of the Congress. Several papers[1] have appeared in the JOURNAL and of others the committee has reprints which it will be glad to furnish to any one interested.

Through the hospitality of Miss Small an informal group of about thirty persons met and had luncheon at the Teachers' Club. There was open discussion, and points were brought up which could not be covered in the sessions. The idea of the luncheon was a happy one, as it not only singled out the group interested in school feeding, but also prepared the way for an interested audience at the sessions.

In connection with the Scientific Exhibit of the Congress, the committee prepared a school lunch exhibit, composed of photographs, diagrams, and statistical material pertinent to the history and present scope of the movement in this country and abroad. It comprises two units of five screens each with stands for mounting and locked traveling cases. The National Child Welfare Exhibits Committee gave valuable advice and assistance as to the arrangement of screens which were built according to the plan used by the Child Welfare Committee for all its exhibit material.

For loan purposes the exhibit was arranged in permanent form,

[1] JOURNAL OF HOME ECONOMICS, June (1914), pp. 207 and 213; also December (1914), p. 437.

and during the winter has been used by several colleges. The chairman will be glad to give further information to anyone interested.

Plans are now under way for the re-organization of the committee on a better working basis, and for the extension of its work. On these plans a later report will be made.

FEEDING SCHOOL CHILDREN IN NEW YORK CITY

EDWARD F. BROWN

Executive Secretary, New York School Lunch Committee

The New York school lunch service has a special significance at this time, because it represents the very first endowed school lunch service in this country. Through the generosity of Mrs. Elizabeth Milbank Anderson, a generous sum of money is being devoted to a Department of Social Welfare in the New York Association for Improving the Condition of the Poor. This Department consists of the Bureau of Public Health and Hygiene, the Bureau of Food Supply, and the Bureau of Welfare of School Children. Under the latter head provision was made for the New York School Lunch Committee.

The committee in 1912 was on the point of disbanding owing to the uncertainty of its contributions. Mrs. Anderson, in making her gift, very wisely directed that a part of the fund should be devoted to continuing and extending the work of the School Lunch Committee. In 1912 lunch service was operated in eight schools on the individual kitchen plan; at the opening of the current school year lunch service for seventeen public schools was established under the so-called group kitchen plan. The scope of the service now extends to seventeen elementary schools with a register of over 25,000 children. The Committee consists of a staff of over forty paid workers.

The Board of Education and the Lunch Committee have an understanding that the lunch service may be extended to as many elementary schools as possible on condition that no liability accrues to the Board of Education by reason thereof. For the first time, a sum of $2300 was appropriated last year by the city for the purpose of installing kitchens in the schools where the committee had agreed to operate. That was the first official recognition, if it may be called

such, of school lunches on the part of the Board of Education in New York City.

The plan for 1913–1914 was to extend the service from seventeen to twenty-eight schools with a registration of 44,000 children, and in order that this might be done the committee asked the Board of Education to provide $6500 for the equipment.

Each child is required to purchase a half pint of warm, nourishing soup before he may purchase anything else. It is believed that this "forced feeding" is necessary especially as an educational feature.

The Association maintains a number of hospitals and provides relief for about three thousand families, besides engaging in a number of other activities that make it advisable to purchase food in large quantities. The Association has organized a food supply store where the committee stores large quantities of food and from which from time to time it draws supplies. The committee is able to enlist the service of expert buyers, and large sums are saved in buying large quantities of foods.

By operating under the central kitchen plan, that is, by preparing food in a centralized kitchen from which the food is distributed to a group of four or five neighboring schools, money is saved in the cost of labor. The serious problem, however, in the operation of a central kitchen plan is the transportation of the food. In the beginning we had to depend on pushcarts propelled by janitors and by the older and stronger school boys who could be drafted into the service; and when we could not get either of these, we had to depend upon floating labor, which we found uncertain and unsatisfactory. During the current year we were able to start in a new direction. We contracted with a truckman to call every morning at ten-thirty, load the large sanitary-covered containers (large enough to retain the heat) on his wagon, and distribute them to the schools. We found this plan entirely satisfactory. For the 1914–1915 term we have arranged for horse and wagon delivery entirely.

One phase of the administration of the school lunch service in which the committee has been particularly successful has been its system of accounting. The aim has been to demonstrate to the Board of Education that no educational system is complete unless it provides not only for the mental growth of the children, but also for the physical growth. No school system is complete unless it provides for feeding children who, in their ordinary course of life, are not given the

proper care in the selection of food. Realizing these facts, and realizing, too, that we should demonstrate a self-supporting school lunch plan, we entered upon a rather comprehensive and intensive cost accounting system. We determined in the beginning, for instance, to know at the end of the year what it cost for supervisory service; administrative salaries; clerical salaries; kitchen help; various foods, such as meats, fish, soup, green groceries, dry groceries, fruits, milk, butter, eggs, bread, crackers, and the like; the cost of equipment for transporting of food; printed office supplies, and the like; charges for telephone, telegraph, postage, periodicals, express, cartage, rent, and traveling expenses.

Another necessary step that has been made is in supervising the health of those who handle the food supplied to the children. Coming in contact as we do with a large group of children, we felt that it was important to obviate so far as it was possible the contamination of the food and the transmission of any disease from the food handlers to the children. Therefore we had each of our helpers undergo a thorough physical examination in order to ascertain whether they were free, as carriers, from such diseases as tuberculosis, syphilis, and typhoid. We urged each of our helpers to be vaccinated, with the result that two-thirds were immunized. There is a group of one hundred and thirty children who assist in the school lunch service. We had these children thoroughly examined, but in a manner unlike the ordinary medical inspection in which the children are examined completely dressed. The committee had this group of children stripped to the waist, and the result was that we discovered one case of a possible typhoid carrier among them, and that some of them had live Pediculi. These children were, of course, taken out of the service, and we were reassured that our food was absolutely free from the possibility of disease transmission through the helpers.

We have extended the scope of our work but slightly from the service of food to the children of elementary schools. In the city of New York there are still private caterers serving lunches in some of the high schools. In others, the student organizations maintain the service for their own benefit. Where the concessionnaires serve the lunches, all the profit accrues to them. We undertook an investigation to see if it were possible to consolidate the elementary and high school service so that the slight profit that could come from the high school service might cover our slight deficit in the penny articles in the ele-

mentary schools. We made an investigation and found that the high school service in the city of New York was a business involving nearly a half million dollars a year.

Our proposal to the Board of Education, which is still pending, is briefly this: that the Board of Education authorize the committee to operate the service in all the high schools; that the committee will seek to provide food of high quality at a minimum cost; that the committee will seek to make that as low as possible, but should any surplus accrue in the operation of the high school service that surplus should be applied to the paying of the deficit of the elementary service and extending the elementary service further than is possible at present.

This proposal appealed to many of the members of the Board of Education, and, unless the student organizations in the schools where concessionnaires now operate take over the school lunch, they are inclined to turn it over to our committee.

The lunch service in the seventeen schools during the last year embraced an average daily attendance of 3300 children, and during the period of service from October 1 to May 22, 1,249,000 portions of food were sold.

The central kitchen plan, which we operated during the last year, has proved its greater economy as compared with the individual kitchen plan of the previous year. We have been able to save on each portion of food the sum of nineteen hundredths of a cent: that is, for each of the 1,249,000 portions of food we have saved nearly two mills in labor, supervision, and transportation costs. This saving conclusively proves that the operation of the central kitchen plan in large cities where the schools are situated near enough together is superior to the individual kitchen for each school. During 1912 the deficit per school was $480.10. Through the concentration of our energies and the expansion of the work, we have been able during this current school year to reduce this deficit to $272 per school, which puts the service on the road towards being an entirely self-supporting scheme.

The total expenditures in the operation of the seventeen schools have been, roughly, $17,000; the total receipts have been $12,000, thus leaving a gross deficit of $5,000. The equipment which is an asset to us, less the depreciation, leaves a net deficit of $4,624.52 in the provision of 1,249,489 portions of food. The deficit for each

penny portion has been thirty-seven hundredths of a cent. This means that we are counting every conceivable item that is a legitimate charge to school lunches.

Next year we plan to serve lunches in twenty-eight schools with 44,800 children, and with a further concentration in preparation and further expansion in numbers of schools, we may be able to reduce the deficit further. The feeling that we ought to strive for this self-supporting elementary school lunch service, is particularly borne in upon us, not merely because of the social service that may be rendered, but also because it is good business. In the city of New York during the last school term there were some 190,000 children who were retarded in grade. The per capita cost of education is nearly $20, and we figured out that the city of New York lost about $3,800,000 in the re-education of the children who for some reason have been retarded. We certainly can attribute a considerable part of this to the physical incapacity of these children for study. Surely it is folly to spend large sums of money on the education of children who because of hunger are not in a receptive mood for the educative process.

WORK OF PRIVATE ENTERPRISES

Other fields of operation involve the request recently received from the Metropolitan Life Insurance Company, which feeds four thousand of its employes daily without charge, for us to make a survey of their lunch plant, including their system of purchasing, preparing, and handling the foods, and the dietetic and sanitary features of this service. This request was complied with.

We feel that while there is no organization dealing exclusively in the extension of lunch facilities to factories and office buildings, we ought to step into that vacant place in the beginning and do as much as we can, and later, if the demand is sufficient, organize a service that will endeavor to establish lunch rooms in factory buildings.

The Anderson Foundation provided for $50,000 with which to study ventilation. The Ventilation Commission is making certain experiments in the city of New York, and we undertook this summer to feed the subjects of these experiments in order to ascertain the relation between atmospheric conditions and appetite.

Another item of coöperation has been the request received from the New York City Department of Health to assist it in the organization of a lunch room for its employes. We feel that this is a most signifi-

cant step because just as soon as the Board of Health Department demonstrates to the city that there is a sufficient demand in the city departments for a lunch service to be run on a non-commercial basis, the other departments of the city will request a similar service.

THE FORMATION OF A SANITARY FOOD CODE

C. F. LANGWORTHY

Chief, Nutrition Investigations, United States Department of Agriculture

The subject under consideration, a sanitary food code, is a proposal rather than a reality. Members of this association realize the great importance of food sanitation, and they have given much thought to existing conditions and to the consideration of possible remedies. Undesirable as food adulteration is, the greater danger lies in unclean food, which is a menace to health because of the disease-producing organisms it may convey, and which is disgusting because of the street dust, excretory products, and all uncleanness, which it has acquired. Existing conditions are bad, but the situation is not without hope, for the ways in which food becomes contaminated are known, also the nature of the danger, and many possible remedies. Best of all, there is evident in many different quarters an attempt at improvement. It seems certain that a set of rules for the guidance of all who come in contact with food would prove a great help. and this association can render good service if it will provide such a guide. For the best results it must secure the coöperation of public officials, health officers, producers of food, manufacturers, dealers in food, housekeepers, and others interested in the matter. Before discussing the content of such a code, it seems worth while to speak of existing conditions with respect to food sanitation and of matters that make such a sanitary food code necessary, also to point out some of the things that are being done to make things better, and to speak of ways in which we can all help to attain the desired object. Without doubt it is true that many of the conditions surrounding the growing, handling, manufacture, marketing, sale, preparation, and service of food which are so undesirable are the result of carelessness and ignorance rather than of design: that is, they are ascribable to a failure to recognize that many common practices are not only an offense against true cleanliness and decency but also a menace to health.

All of us—the grower, the dealer, the servant who prepares the food, and the family who sits at the table—are consumers of these food products; therefore we cannot afford to permit insanitary practices. Unless we are careful all along the line, we are all likely to suffer from the carelessness or ignorance of some one. Selfish interests, if no other reason, should make us all willing to work for better conditions.

Existing conditions range all the way from the unspeakably bad to the extremely good, but the proportion of good is growing larger. It is well to realize, too, that the evils that we are trying to eradicate are not confined to the practices of producers, manufacturers, dealers, or public distributors of food, but are too often in our own homes. Nor are the dangers confined to any one class of foods. They may lurk in green vegetables and fresh fruits, as well as in dirty milk, or meat and fish unfit for sale. For example, green vegetables grown in soil fertilized with night soil are a great source of danger unless they are cooked before they are served, for contamination with fecal bacteria (and this too often means pathogenic bacteria) is almost certain. It has been found by experience as well as by laboratory work that, although washing lessens the danger and should never be omitted, it is practically impossible to do away entirely with such contamination by this means, even though all visible dirt may be removed. It follows then that the contamination must be prevented. No European resident of China or Japan, we are told, would think of eating green salad plants grown by the native market gardeners owing to the general use of night soil as fertilizer. There is a possibility of contamination of strawberries or other fruits that grow near the soil or that drop from the tree to the ground, and if fruits are once contaminated, it is difficult to make them safe except by cooking them, though it is comparatively easy to remove the sand, bits of earth, and straw, which may have adhered to them. Fortunately, such pollution of soil through wrong use of fertilizers has not been general in the United States, and it is perhaps for this reason that we use much more uncooked fruit than is found on the table in many older countries. Nevertheless, there is a very real danger from this source, as is evident from the efforts of the United States Public Health Service to do away with this practice in soil fertilization.

Food can be easily contaminated by handling. Utensils washed with polluted water may readily convey typhoid fever. Milk pro-

duced and handled under insanitary conditions becomes unsafe. A typhoid carrier who handles food may convey the disease to many others. Typhoid Marys, unfortunately, are not at all a rarity. A person who is suffering from an infection of the nose or throat may cough or sneeze without covering the face and spread the bacteria of infection as well as droplets of saliva over food and everything else that is within a fairly wide radius. Sewage flowing over oyster beds may contaminate oysters. Dirty clothing, dirty surroundings, unclean ice, unwashed hands, rats, mice, flies and other insects, unclean air, and a lack of proper sewage and drainage facilities—all these may be dangerous causes of pollution of food. Perhaps the greatest danger of all is the human hand, for nothing comes so often in contact with filthy things and food products alike, and only too often without proper washing. Some food manufacturers display conspicuously the sign: "When you leave the room for any purpose whatever always wash your hands before returning to your work." Such a sign would not be out of place in every kitchen, and in every shop where food is handled. Could we not display some similar sign that would make us realize that after we have gone back to our work with clean hands we must continue to keep them so and avoid the contamination that comes from running the fingers through the hair, putting them in the nose, ears, or mouth, or doing similar things?

That such conditions as those above mentioned exist, no one who is a careful observer can doubt; that such things are disgusting, no one can deny; that they are dangerous, no one can dispute, for it has been established by a great mass of clinical and laboratory evidence. To cite only one instance, a recently published work by Stiles shows that the digestive tract of man very commonly contains a microorganism that can be there only because something that has suffered fecal contamination has been taken into the mouth. Even if such conditions did not involve illness, common decency would make any one wish to avoid them, almost as much as he would typhoid fever, cholera, or other diseases that must also gain entrance through the mouth.

Persons as a rule are very careless in the matter of washing their hands. This fact has been established by counts that have been made in toilets in public places by one of the philanthropic associations in New York. Would a similar count in hotel kitchens or in home kitchens indicate a higher percentage of cleanliness in this re-

spect? At any rate, we may be certain that in such kitchens it is not universal, for cases of typhoid are often traced to a typhoid carrier who has spread infection by this method.

The sterilization of cooking utensils, drinking glasses, cups, knives, forks, and spoons, which otherwise may convey "colds," diphtheria, pneumonia, and other diseases, from mouth to mouth, is something that should be insisted upon, just as much as the sterilization of milk cans or factory equipment. We believe that service of food is more often cleanly in the home than under commercial conditions, but we have not yet reached the stage when we make sure by examination that those who handle food are free from communicable disease. Not all, I think, are as careful as they might be in the matter of washing the hands, attention to finger nails, avoidance of tasting from a spoon and putting it back into the food without washing it, or in the matter of sweeping and dusting while food is being prepared, and of keeping flies, household pets, and other possible distributors of dirt and micro-organisms out of the room where food is handled or served. In the public service of food as well as in its preparation there is greater danger, for the personal interest which is present in the home is lacking. There are also lacking the supervision and the opportunities for cleanliness (shower baths and the like) which are commonly found in high-grade food factories. There are very few homes where there is any medical inspection of those who prepare and handle food, though this is not infrequently found in the commercial food industry. This matter of the health of employes and cleanly habits in working is of the utmost importance, and every effort must be made to see that proper sanitary regulations are enforced in the home and out of it.

Better practices in the public service of food must prevail just as much as better means of handling it in the factory or in the shop. It should be no more difficult to teach a waiter to avoid polishing the dishes with a soiled napkin than it is to teach an employe to wash his hands before he packs some food product into a box for shipment from the factory. If we cannot make sure in any other way about the napkin and service towel, we should insist that the service towel be distinctive in color. It can then be easily identified. If the napkin were used only to wipe the lips or the fingers or to protect the clothing from bits of food, which fall accidentally, there would still be reason enough to limit it to its obvious purpose, but we cannot overlook the fact that often it covers a person's face when he sneezes or coughs,

even though it may not very often serve the other purposes for which a handkerchief is designed. Its other uses are too dubious to permit its use as a service towel.

There was a time when we were only too inclined to dismiss these disagreeable subjects with the statement that persons have always done these things and the race has survived—a statement which is true, though the force of the argument is lost since we have every reason to believe that the percentage of survivors was not so great in the "good old times" as now. That the proportion increases with cleanliness is shown by the diminished infant mortality that follows the establishment of a clean milk supply. Then too, we are always meeting the "dainty-minded" who say that these things are disgusting and unpleasant to talk about, that we cannot avoid them, and that it is therefore better to forget them. Concealing an evil is never a remedy, and we must talk of these as of many other unpleasant subjects at the right time and in the right place, in order to arouse public opinion and bring about better conditions.

After considering the problem, representatives of this Association came to the conclusion that the whole cause would be furthered by the preparation of a code, or guide, containing simple rules for the guidance of all those who come in contact with food in one way or another in its long journey from the farm to the table. Accompanying the rules should be some explanation of what contamination means. It should also be made plain that visible dirt, undesirable as it is, is less to be feared than invisible contamination that may accompany it or that may be present even when the article looks clean, and that the dangers of dirty food are such that no one can be sure that he will escape them.

Something should be said of the scientific and economic facts that underlie the whole question of a clean food supply. There are many reasons for believing that producers and distributors of foodstuffs, those engaged in the sale of food in hotels and other public places as well as in shops, purchasers of food, and housekeepers would join gladly in a campaign for improved conditions. Many manufacturers already insist on a standard of cleanliness, which does not exist except in carefully supervised homes. Many persons who are engaged in the sale of food on trains and in hotels and restaurants have also established a high standard of cleanliness. The same may be said of the merchants who realize that goods must be protected from dust and insects

and must be handled in a cleanly way. Every one knows that housekeepers and other purchasers of food are every year realizing the need for clean food, sold under clean conditions, and for making sure that those who prepare the food for them do their work in a cleanly way and are not affected with disease which they could communicate to those who share the results of their labors.

It would be interesting to cite in some detail the efforts that are being made by manufacturers, producers, and distributors of food to insure better conditions; to refer to the efforts that are being made to secure clean food factories and to insure decency in all that pertains to food service in hotels, on dining cars, and in other public places; to discuss state and municipal regulations for governing the production and sale of foods; to note the efficient services of health officers, physicians, and teachers, as well as the increasing interest shown by housekeepers; and to cite at least a part of the valuable information on this subject which has accumulated in the laboratory and been published in journals and books.

The members of the Council of the American Home Economics Association who have had this sanitary food code under consideration have made an attempt to bring together data and have done other preliminary work. Further information concerning the project can be secured by those who are interested.

If the sanitary food code project finds favor with the Association, much remains to be done before the code can be compiled. The project, it is believed, may well form a part of the work for the Memorial Fund Committee, for no one was more interested in all these matters than Mrs. Richards, and few have made a greater contribution to the subject than she did through her work for a pure water supply, by her writings, and in other ways. At the same time she was a splendid example of personal cleaniness in food matters and all else that pertains to right living in the home and out of it.

UNIT COSTS IN INSTITUTIONS

WILLIAM MORSE COLE

Harvard University, Cambridge, Mass.

It is practically impossible to say anything new as to the reason why we have unit costs. Astronomers in talking about the distance of stars from the earth do not say that a certain star is so many mil-

lion miles away, they say it is so many light-years away. If we were to read that a certain star was two hundred fifty-seven quadrillion miles away from the earth, it would mean little. We must have the terms in measurements that we understand; therefore, if we are told that the light of a certain star started from that star when David was the king of Israel, the distance means something to us. The statement that the cost of food in a hospital is $347,000 a year means very little unless the cost of food in some particular hospital is used as a standard. A comparison may be made in regard to two things: namely, the scale of expenditure or the standard of living, and the number of people. If the cost per capita for food in a certain institution is two dollars a day, we decide whether that expenditure is high or low, by comparing it with the normal.

For institutions the standard unit cost is computed per resident day. Allowance must be made for the fact that the size of the institution will have a great deal to do with the unit cost. Mr. Dewey has been trying to learn what is the unit for which a kitchen may be run most economically to supply one hundred, two hundred or four hundred persons. A great many persons believe that the most economical unit for cooking and serving is four hundred persons; others believe that it is one or two hundred. In any case it is necessary to know the size of the institution in order to know the possibilities for economy. Increasing the scale of operations may increase the economy of operation up to a certain point; equipment is increased; the cost of operation immediately increases again until a new maximum scale is reached. That is particularly illustrated in the operation of railroads. The cost per mile of running trains on a single-track road decreases, if traffic increases, within the limits of efficient operation. The minute traffic increases beyond that point a double-track line must be laid. Then the expense per mile of running trains increases tremendously because twice as many miles of track are being maintained. If traffic continues to increase then the cost of operation decreases until the capacity is strained and a third track must be laid. The matter of unit cost must not be taken with extreme seriousness unless it is realized that the scale on which an institution is operated has something to do with it.

Unit cost is the cost per resident day, not per capita day. The latter is very different from the cost per resident day and includes the cost of feeding and housing residents, servants and perhaps laborers.

If a school unit cost is being computed for a school, the resident day of the students must be used as a basis; if for a hospital, the resident day of the patients; if for a hotel or club, the resident day of the guests. The first division is into the cost per resident, and cost per employe. The result will not be the average of the two, unless the institution is very unusual, because there are not as many employes as guests. The ratio between employes and residents varies from one employe for perhaps five or six guests, to two employes for three guests. This ratio depends entirely upon the kind of service rendered, and it will have a very great effect upon the unit costs of the institution.

The division of unit costs into the two classes, the cost per resident day and the cost per employe day is very unsatisfactory because neither the waste nor the economy is located exactly, but merely for the institution as a whole. The fact that there is waste or economy is only the basis for intelligent management of an institution. Waste and economy should be located in the different departments, for in an institution there may be a very well administered purchasing department, and a badly managed cooking department.

Unit costs should be subdivided into various elements. The raw food cost should be subdivided into per capita day, per resident day and per employe day. These costs should be compared with those in other institutions and in this way they may be found to be high, normal or low. Different standards of living should be taken into consideration in making these comparisons.

The next subdivision of the unit costs should be into the cooking cost per capita day, per resident day and per employe day. It may happen that the cooking costs per resident day and per employe day are the same, but in most cases the cooking cost varies proportionately with the raw food cost. The cheaper foods are usually less expensive to cook.

Serving costs should be subdivided in the same way. This could not be done in hospitals because the serving and the nursing are so nearly combined that it would be impossible to divide them. The housing cost should be subdivided in like manner. The total housing cost is the cost of the sleeping accommodations, the housekeeping care, the care of rooms, and so on, including the care of the general rooms, the halls and the stairways. The laundry should be divided into the cost per resident day and per employe day if it is possible to divide

them. The administrative cost is usually computed per capita day, although it might possibly be subdivided.

These are only the main subdivisions, and they should be subdivided further. The raw food cost ought to be extensively subdivided. A committee spent several days in discussing what subdivisions of raw food cost ought to be made in order to enable a person to judge intelligently or efficiently both the purchasing and the dietetic standards of the institution. For instance, if one person obtains certain kinds of dietetic results by purchasing one kind of material, and another person obtains the same results by the purchase of another kind of material, obviously the costs would be different, or if one thing is substituted for another because it is less expensive, or because one group may be devoted to the taste and the other to the psychological effect of the diet.

Certain main subdivisions of raw food ought to be made. The main subdivisions, accepting them for the moment as very unsatisfactory, are in the first place, meat costs, because food costs are very largely affected by the degree to which meats enter into the diet, then milk, cream, and possibly butter costs combined. The latter are dairy products and they are grouped together for that reason only, for they serve different purposes. Fruits, fresh fruits particularly, furnish another group of costs; flours, cereals and the like still another group.

The housing costs should be subdivided into at least four items of which the first is the rent, in case rent is charged. Most institutions do not pay rent, in which case five separate items are combined in place of rent cost. These five items are interest on the investment or interest on the value of the property; insurance, taxes; depreciation; and maintenance. Those five items are the cost of the buildings housing the institution, and they cannot be avoided as cost. The difference between depreciation and maintenance may be stated in this way: the amount that is spent to keep the property in condition is called maintenance; the amount that should have been spent, or the equivalent of that amount, is depreciation if it is not spent. A chimney may last fifty years, but it cannot be kept in condition by putting in two bricks every year. You must let it run down and then repair; there must be a certain amount of depreciation in every building. The chimney may have no repairs for twenty years, but in the meantime changes have been made in other things every year.

The second and third costs are lighting and heating and these should

be put in terms of units. If the lighting cost per capita or resident day is more in one institution than in another and the former institution is not of a higher grade, either the cost in it for light is too much or the persons in it are wasting light. The same thing is true of heating. In certain institutions cold air is a remedial thing, and the heating cost should be lower there than in other institutions.

The last housing cost is the housekeeping cost—the care of the building, such as cleaning, dusting, scrubbing, making beds, and the like. The minute any of these subdivisions are combined, it is impossible to learn whether the institution is being capably administered or not. There may be a loss somewhere offset by a particular saving or a particular fortunate situation. There is no reason why a manager of an institution should be given credit for a low cost due to a favorable situation. If, for instance, an institution is rather remote and entirely surrounded by grass, the dusting cost should be low. Care should be taken to differentiate those costs that are due to management from those that are not due to management, and this cannot be done unless the costs are subdivided.

There has recently been published the first study in cost accounting in construction work although a great deal has been published on operating costs. The pamphlet contains this very interesting illustration. The persons for whom the system was devised are producers of concrete construction work. They have for a number of years been studying the desirable unit cost to maintain in their business. They have shown in this pamphlet in what appears to be a very simple type of construction something like forty or fifty different elements for which they compute unit costs. Last year they made a study of one job that on the face of it appeared to be very efficiently directed so far as anybody from the superficial idea of the subject could see; the men were working faithfully and hard and everything was satisfactory. After that job had been under way for six weeks they made a study of the unit costs. They found out how many feet of concrete work had been done, how many tons of steel had been put into the reinforcement, and so forth. The result was that they found themselves $10,000 behind on the construction up to that time and if it had continued they would have lost $20,000 or $25,000 on this job. The reason for this condition was not apparent, but they found out, by computing the unit costs, that they were losing money and they shifted their force. They put most of the superintendents

on other work and put new superintendents in charge. In five weeks they had recovered the $10,000 and were making profit on the work. This example illustrates the necessity of subdividing unit costs and applying them.

DISCUSSION OF MR. COLE'S PAPER

Mr. Hinkley, of Hotel Statler. The business in which I am interested is entirely different from that in which most of you are engaged. The hotel proposition is purely for a pecuniary gain, and we have not as yet gotten to the question of unit costs. We feel that, in our business, cost accounting is the very crux of the whole question. In our two hotels we have now established a cost accounting system, carried on so that we know exactly what each hotel is paying. We know too what the results should be in all of the different departments. We have placed the two hotels on a percentage basis, and everything is figured on percentages. We know what percentage should be allowed for the housekeeping, the labor, the power, the laundry, etc. The restaurant, which is practically all à la carte, for we have no American plan, is an entirely different problem, but there again it is a question of percentages. We hold our steward, in each hotel, to a certain percentage upon the cost of raw supplies. We do not charge the dining room with rent, light, heat, power, laundry or cleaning, but we arbitrarily fix a certain sum for that amount and we offset it by having the steward feed all employes.

We are endeavoring to get away as far as possible from feeding employes. We have abandoned the feeding of officers, and arbitrarily increased their wages or salaries so much per month and asked them to take their meals out. In our newer hotel in Cleveland we have put in a service which is practically a cafeteria proposition. We have the ranges and the steam tables, and employes help themselves.

We have the restaurant on a basis of percentage also. On meat, sea food and vegetables, it is purely a percentage proposition, one house against another. And when the percentage is very low in one house, then is the time to analyze the cost sheets. We place it on a monthly basis. We take a percentage of the profit so that if a man buys $3000 worth of meat in one house, and shows only 17 per cent profit and another man shows 35 per cent, then we know there is something wrong because they are buying the same meat; either they are selling it too cheap in one house or giving too large portions. Our

sheets contain columns for every article of food, except butter, milk, and cream, which goes into the cooking of the dishes, but every article that is served is analyzed. Whether or not that percentage proposition could be extended I do not know, but it is an excellent standard for more than one institution that is operating under the same management.

We run our own laundries. In our Buffalo house we have a laundry equipped for flat work; in our Cleveland house we do both the flat and bundle work for the guests and so there is no comparison as to figures at present. Out of 1000 employes probably three or four hundred are Polish women, and it is necessary to keep them in the buildings and feed them. Our percentage is not only of labor, but of supplies and everything else. The percentage basis is rather new in the hotel field. We do not analyze an item like coffee. We take all meats, poultry, sea food, fish, vegetables, pastry and ice creams, which are practically all that can be analyzed as percentages, but of course in the further analysis of the business, we do keep a complete table of every article. Every meat is separated but not as percentages. That is merely for the guidance of the steward in knowing what is popular. The percentage is of the meat as a whole. Staple supplies come to us at regular intervals and are charged to expense.

Mr. Hoffer, Hill School, Pottstown, Pa. We have about 370 boys, nearly all of them living at the school, and we feed about 100 servants. We have two departments, the one the administration of the school and the other the kitchen and bakery. We have a monthly distribution, and we make counts regularly to know how many people are fed in the school department, how many in the help department and the number of guests. In the total cost we include fuel, the breakage and the maintenance of utensils. This is divided by the number of meals, to give us the cost per meal per month. With that we carry a complete report of the year, and in that way decide whether the cost is increasing and how it can be decreased if necessary. On the other side of the account we have the executive department, and the school department, including the salaries of the teachers, and the miscellaneous department. Then follow the grounds, repairs and renewals, the stables, automobiles, taxes, and everything that belong to the general administration. The boys at the Hill School come mostly from wealthy families who are accustomed to very expensive living, but the Hill School people have believed that the table has been de-

vised largely for their good rather than for their taste. The cost per meal never runs over 23 or 24 cents. The fee for the year's tuition is $1000 which includes repairs, renewals, everything except rent.

Miss Proctor, Junior Bursar at Bryn Mawr. We have an allowance which was given some years ago, and we are trying to work out now, from this original allowance which has not been increased, how the cost of living is going up in our neighborhood in Pennsylvania. It is a very wealthy section of the country and the question of quality is of very great importance to us in our college because we have a large class of wealthy students to cater to. We allow 36 cents a day for food and divide it into different amounts for each meal, 9, 12 and 15, and reckoning it on the basis of 12, use $\frac{3}{12}$, $\frac{4}{12}$ and $\frac{5}{12}$ to estimate the cost of things, taking into account absolutely everything, including salaries of the housekeepers, cooks, maids and men, cost of preparing foods, the cost of the food itself. We found that the last college year of 1912 and 1913 we were just within the limit of our charge. Some years ago it was a matter of income and we had come up to the limit. This year we are working to see how much we would have to increase board, to find out how we would still keep our standard up, give them sufficient food for their vigorous outdoor life, and not run beyond our limit.

Miss Fleming. We have helpers in the kitchen regularly employed who come into the cafeteria for their meals. Then there are student assistants at 20 cents an hour, and to them we give a rebate of thirty per cent for every hour they work. For instance, our half-monthly payroll is made in the form of a memorandum to the person having charge of the cash register, showing the number of hours that each person has worked for that 15 or 16 days, and that memorandum is a guide to the person at the cash register in giving rebates. This is for students employed by the hour. For regular employes we keep a record showing the actual sale price of the food they receive but board is a part of their wage. Their meals average about the same as the meals of students coming in.

Miss Sperry. We maintain a dining room for the students at Berea College. During the winter term when there is extra expense for heat and light the per capita cost is $1.50 per week. In the fall and spring it is $1.35. We have good storage room and buy many of our supplies by the carload and our canned goods in gallon cans. We have a school garden and a dairy from which we secure milk at the rate of

20 cents a gallon in winter and 16 cents in the spring and fall. We buy the shoulder clods of beef at 13 cents. There is a refrigerating plant that makes it possible to store perishable goods and we are experimenting on the preservation of eggs. Supplies are selected and records kept through the requisition sheets. The rent of the boarding hall and the initial cost of equipment is not charged to the dining service, but heat, light and help are all included in the $1.35 and $1.50 per capita cost.

We serve meat once a day except with the occasional substitute of fish. We have found that dried beef at 30 cents a pound and good milk gravy makes a less expensive dish than solid meat. In the spring term when eggs are 15 cents we serve them once a week in place of meat.

Student help is used as much as possible. The aim of the school is to give students employment and in getting new machinery the question is always considered whether it will eliminate student help too much. Wages vary from 5 to 12½ or 15 cents an hour. We pay according to the grade of work the students do.

THE COST OF FOODS IN NON-MEAT DIETARIES

LENNA F. COOPER

Head Dietitian, Battle Creek Sanitarium

The cost of food plays no small part in the present high cost of living. The fact that meat is one of the most expensive articles of diet is illustrated by a comparison of the costs of a mixed diet and of a non-meat diet.

The costs of foods given here are from the non-meat dietary in use at the Battle Creek Sanitarium.

There are at this institution two classes of dining rooms, one for the guests, another for the employes. For the guests no pains are spared to obtain fresh fruits, vegetables, or other delicacies that are on the market whether in season or out of season.

In the purchasing of supplies the sanitarium is at considerable disadvantage, however, for it is distantly removed from market centers, being about one hundred and fifty miles from Chicago, the nearest one. Consequently much of the produce must be purchased without having been seen, and it is often somewhat deteriorated when it

arrives, thus entailing considerable loss. The installation of a cold storage system and the exercising of extremely careful supervision has cut down the loss very materially in the last year, as will be shown by figures given below.

The cost of foods in the guests' dining room for the year 1912 amounted to 67.8 cents per capita per day, or 22.6 cents per meal. The first six months of the present year 1914, the cost of foods per capita per day has averaged 58.7 cents, or 19.5 cents per meal. The cost per capita per day is divided as follows:

Cream	$.0615	Health foods	.0308
Butter	.0518	Bread	.0302
Eggs	.0307	Canned goods	.0778
Fruit	.0971	Nuts	.0085
Vegetables	.1379	Milk	.02576
Groceries	.03334	Beverages	.0113

The total cost of foods for this same period was $67,866.44. The total number of guest days was 115,590.

A copy of one day's menu is given in order to give an idea of the variety of food in the guests' dining hall:

BREAKFAST

Fresh fruits
- Canteloupe
- Apples

Cereals (with pitcherful of cream)
- Cream of wheat
- Scotch bran brose
- Toasted rye flakes

Gruels
- Gluten gruel
- Barley gruel

Entrées
- Broiled protose
- Scrambled eggs

Vegetables
- Baked potatoes with brown sauce
- Potato cakes with gravy

Toasts
- Cream toast
- Peach toast

Breads
- Whole wheat bread
- White bread
- Entire graham bread
- Breakfast toast
- Toasted rice biscuit
- Toasted granose (wheat) biscuit
- Good health biscuit
- Bran biscuit
- Coffee cake

Butters
- Nut butter
- Palm butter
- Sterilized butter

Cooked fruits
- Apple sauce
- Prune sauce

Relishes
- Malt honey
- Malt honey with butter
- Malt sugar

Beverages
- Apple juice
- Grape juice
- Milk
- Yogurt buttermilk
- Yogurt buttermilk with cream
- Sanitas cocoa
- Hot malted nuts
- Minute brew with sugar and cream
- Kaffir tea

DINNER

- Soups
  - Washington chowder
  - Lentil soup
- Entrées
  - Nut fillets
  - Nuttolene with piquant sauce
  - Spaghetti Milanaise
- Vegetables
  - Baked potatoes with brown sauce
  - Creamed potatoes
  - Fresh asparagus
  - Wax beans
- Relishes
  - Lettuce with lemon
  - Fruit macedoine
  - Sliced tomatoes
  - Malt honey
  - Malt honey with butter
  - Malt sugar
- Breads
  - Whole wheat bread
  - White bread
  - Entire graham bread
  - Rye bread
  - Breakfast toast
  - Toasted rice biscuit
  - Toasted granose (wheat) biscuit
  - Good health biscuit
  - Bran biscuit
- Butters
  - Nut butter
  - Palm butter
  - Sterilized butter
- Cooked fruits
  - Peach sauce
  - Stewed raisins
- Beverages
  - Apple juice
  - Grape juice
  - Milk
  - Yogurt buttermilk
  - Yogurt buttermilk and cream
  - Sanitas cocoa
  - Hot malted nuts
  - Minute brew with cream and sugar
  - Kaffir tea
- Desserts
  - Apple tart
  - Cherries
  - Pine nuts

SUPPER

- Soups
  - Tomato macaroni
- Toasts
  - Browned rice patties
- Vegetables
  - Hashed brown potatoes
  - Kidney beans
- Cereals (with cream)
  - Toasted wheat flakes
  - Farina
  - Gluten gruel
- Breads
  - Whole wheat bread
  - White bread
  - Entire graham bread
  - Breakfast toast
  - Toasted rice biscuit
  - Toasted granose (wheat) biscuit
  - Good health biscuit
  - Bran biscuit
  - Lettuce sandwich
- Butters
  - Nut butter
  - Palm butter
  - Sterilized butter
- Relishes
  - Yogurt cheese
  - Malt honey
  - Malt honey with butter
  - Malt sugar
- Cooked fruits
  - Plum sauce
  - Pear sauce
- Beverages
  - Apple juice
  - Grape juice
  - Milk
  - Yogurt buttermilk
  - Yogurt buttermilk and cream
  - Sanitas cocoa
  - Hot malted nuts
  - Minute brew with cream and sugar
  - Kaffir tea
- Desserts
  - Lemon cream
  - Sweet graham wafers
  - Apples

The employes' dining hall is now conducted on the cafeteria plan. When the writer first became a member of the Dietetic Department of the institution, the employes' dining room was run on a semi-cafeteria plan. The food was placed on the counters, the employes passed by in line and took from the counters any amount of food that they wished. As they passed out of the dining room their meal tickets for twenty-one meals were punched. No price was attached to the individual dish. This gave the opportunity for very injudicious choice of food without any regard whatever to expense.

The writer then took a class of students in domestic science into the dining hall, and a week's dietary study was made. As a result it was found that between one-sixth and one-fifth of the total amount of food issued from the storerooms finally found its way into the garbage cans as waste, and that the cost of foods alone amounted to about $2.38 per week, or $0.34 per day. This did not include service.

A recommendation was made to the board of managers that the plan of serving be changed and a strictly cafeteria plan be adopted. It was necessary then to put employes upon a so-called flat rate, allowing each one a certain amount for board which could be spent at the cafeteria or elsewhere. The rate fixed was ten dollars per month, and it was expected to cover only the cost of food and of labor.

This plan has been followed for some years very satisfactorily. If there is a large number of employes to be served, there are many advantages in serving them on the cafeteria plan. The first and most important advantage is that the responsibility of economy is placed on each individual. When a person feels that he is paying for each article he is more careful of waste than when he is paying by the meal. Upon the adoption of the cafeteria plan the amount of garbage which had been several canfuls per day, was cut down immediately to two or three canfuls. Another advantage of the cafeteria plan is that the individual taste may be catered to much better than under table d'hôte system. This does away with the most of the complaints that are common among hospital employes.

A great number of banquets are given at the sanitarium, and the menu of one banquet given last year by the students in domestic science is given here.

Salpicon of fruit
Celery Radishes Olives
Cream of rice soup Bread sticks
Nut meat loaf Creamed potatoes
Cranberry sauce Green lima beans
Buns Breads
Apple juice
Apple and nut salad Cocoanut sticks
Pineapple cream dessert
Minute brew with whipped cream

Total cost of materials	$125.195
Cost of labor	$110.25
Total hours of labor	565
Cost of foods per capita	$0.397
Cost of labor per capita	$0.35

This banquet was one of the practice meals prepared by the domestic science students. The number of guests was three hundred and fifteen.

FACTS DESIRED ON COST OF LAUNDERING

Miss L. Ray Balderston, instructor in Laundering in Teachers College, New York City, is making a study of relative costs of commercial and home laundering in various parts of the country. Readers of the JOURNAL can answer her inquiry with little personal inconvenience and are asked to do so.

Miss Balderston desires "assistance in securing copies of printed price lists from one or more laundries in each community, for regular goods for men and women, flat work, body work, etc., and any special rates that they may have for the family washing, "wet wash," "rough dry," or wash per hundred, per dozen, or per pound; in fact the prices which families must pay to get their laundry handled at the commercial laundry.

Also the wages of the laundress by the day, or by the hour, as she comes into the home to do the work. Is she usually given certain additional payment as breakfast or dinner or car fare? What is the usual charge for laundry sent to the home of some woman laundress per "wash," per dozen? Information as to both home and commercial work is needed, but the rates of commercial laundries are especially desired.

THE SCORE CARD FOR RATING EMPLOYES

ANNIE DEWEY

Lake Placid Club

A list of traits of character, mind and personality which are desirable in the type of employes with whom we deal every day, easily runs over a hundred. Eliminating many synonyms, using positive rather than negative terms and endeavoring to make as simple a form as possible, the result is still a cumbersome card which does not apply equally well to all kinds and grades of helpers or to men and women alike. Certain traits which are important in some positions are of little value in others, yet it is very desirable to discover unusual qualities and to discharge, or promote and reward for service which is less or more than the average.

The *Autocrat of the Breakfast Table* explains that every human being is at least three distinct personalities. There is the real man, known only to his Maker, there is the man's ideal of himself and the ideal that others have of him. If applicants are intelligent enough to mark themselves, and heads of departments mark them later, according to results shown in their work, the employment bureau, controlling all engagements, may secure a fairer idea of the true value of services rendered. When the score or grade card is printed on the reverse side of the application blank, this one sheet, kept on file permanently will give concisely the record of each employe for a period of five years or as much longer as columns may be ruled.

However careful the grading on any such basis, there still remains that intangible, indescribable motive power, rate of vibration or spiritual key note with which every human being is endowed at birth. It is this invisible quality for which we most need a test. Doubtless some day science will give us a unit, comparable with horse power, calorie, and kilowatt, which will measure this ego-spark which is the mainspring of human action, which sets a limit to man's power and is the ultimate measure of his capacity. The possession of this motive power in any high degree demands health of body, mind and morals. Who will give us this unit, this test of man-power?

LAKE PLACID CLUB GRADE CARD

The purpose of this card is to discover and promote unusual efficiency. Work badly done is drudgery. Work well done brings pleasure and success.

Close grading requires that each line be weighed separately. Quick grading may be by catch words only, or even quicker, each group may be given a total per cent, after the first close grading.

Applicants mark themselves in first column at right, as fairly as they can judge. Numbered columns are to be marked by department head at end of each season.

Scale: 1 poor, 2 doubtful, 3 average, 4 better, 5 best.

	1	2	3	4	5
PHYSICAL, 20 per cent					
Health—strength, endurance.					
Industry—energy, diligence (no loafing or shirking).					
Neatness—in work, dress, person.					
Defects—in sight, hearing, speech, body.					
MENTAL, 40 per cent					
Education—common, high school, college, technical.					
Intelligent—interested, teachable, willing.					
Apt—alert, skillful, quick.					
Accurate—attentive, observant, good memory.					
Careful—orderly, systematic.					
Prompt—punctual (no procrastination).					
Cheerful—good disposition, optimistic.					
Ambition—enthusiasm, force, persistence, will.					
MORAL, 40 per cent					
Honest—truthful, reliable, trustworthy.					
Coöperation—loyal, conscientious, unselfish.					
Courtesy—good manners, quiet, self possessed.					
Habits (cross out and count 1 for those never indulged in) liquor, drug taking, profanity, graft, gossip, tobacco, gambling, vulgarity, tips, temper.					
Late Hours—out or indoors (joy rides).					
Conduct—towards other sex, self respect, sex restraint.					
Waste—misuse of food or equipment (no lunching).					
Total grade, per cent					
Traits for Special Promotion: mark on scale of 10.					
Executive—grasp of details, supervisory experience.					
Resourceful—creative, initiative, ideals.					
Discipline—control of self and others, tact.					
Judgment—sense of proportion.					
Fairness—justice (no favoritism).					
Physical—					
Mental—					
Moral—					
Quality of work—					
Quantity of work—					
Total special, per cent					

$1 is offered for each new suggestion submitted in writing and finally adopted which will improve service or lessen cost. $10 will be paid for the most suggestions, above 5, submitted by one person and adopted. Coöperation of all employes is cordially invited.

BUYING, STORING AND HANDLING FOOD SUPPLIES

ANNIE DEWEY

Lake Placid Club

The food of primitive man was very simple compared with present day requirements. Since war-like implements were developed and fire and cooking were introduced, man has gone on surrounding his daily meals with increasing complexities until to-day practically every country and every climate contributes something to the tables of the prosperous in civilized lands.

We read that, in the days of Roman luxury, peacocks' tongues made a choice dish to tempt the palates of epicures. In my own girlhood days Point Shirley in Boston Harbor was famous for its game dinners and humming birds were sometimes served in English walnut shells as a special delicacy. The jaded palate today must be tempted by a great variety of foods and many of them are very perishable. Man's ingenuity, his inventive power, seem ever to keep pace with the demands made upon them and methods have been developed by which these perishable foods can be preserved, many of them for quite long periods so that, if temperatures are scientifically controlled, some of them are scarcely distinguishable from fresh foods. It is a sad fact that with this increase in variety and complexity of life, diseases seem to have increased in proportion and it is imperative that we go back to nature and a simpler life or our race will inevitably be replaced by a stronger and more rugged people.

Man, the human animal, eats from one to five times a day in different countries and climates, and in proportion to the number and variety of his meals must he depend on modern methods of preserving, preparing and serving his daily rations.

To-day a man who expects to build up successfully any large business or enterprise, must so organize and administer it that if anything happens to him, if he steps out, it can go on in the same general lines and with equally high ideals. A good administrator has been defined as "one who can so organize his work that he is not necessary

to it." There are few lines of business which require greater accuracy, skill and careful application of scientific principles than the buying, storing and handling of food supplies for large numbers.

This and the three following papers are not an attempt to give an ideal system but simply to show one way of dealing with the problem as it has been worked out at the Lake Placid Club. Others may have worked out better details in some directions and as a result of open discussion we should find a combination of the best methods to adopt as a standard or basis for further development.

An alphabetic list of addresses of all firms from whom supplies are bought, is kept on cards. This is supplemented by a dictionary list of names of each article so that one not familiar with the routine may easily see where any article needed has been obtained formerly, and the price. This includes all supplies bought by the store, other than food, such as disinfectants, laundry and housekeeping supplies, paper, etc. An index book in which is written the name of each article with prices for the different grades, has been used but this is being transferred to card index form also, as more convenient and easier to keep under revision as market prices vary.

The method of storing and handling the supplies is given in the papers that follow.

DAILY ROUTINE IN HANDLING FOOD SUPPLIES

S. C. MEIGHER

Steward Lake Placid Club and Royal Ponciana, Palm Beach, Florida

The most essential thing in handling large quantities of perishable foods during the summer months, is to have correct daily inventories. Each morning at 10 o'clock the head butcher and storeroom man hand in the exact amount of meats, fish, fruit, and vegetables that are in the various coolers and necessary orders are sent, the amounts being governed entirely by the number of guests, the house count being sent daily from each kitchen. It takes about forty-eight hours from the time orders are mailed until the goods are delivered via national express either from New York or Boston and six hours from Tupper Lake where Armour and Company have a large distributing plant. Every Wednesday a refrigerator car comes direct from Chicago which supplies a large part of the heavier meats.

The most reputable firms are selected to deal with and printed lists

are received from them two or three times a week telling what they have to offer, and prices. All orders are made out in duplicate, one mailed and one retained for reference and to check supplies upon arrival.

All goods are inspected upon arrival and anything that is not considered up to standard is either deducted from invoice or claim filed against the express company for damages or delay.

With groceries and all non-perishable goods, inventories are handed in at the end of each week and orders mailed, all shipments being made by freight instead of express, taking usually from six to eight days from the time orders are sent until received.

The chefs of the different kitchens come to the store each morning and go over the stock on hand, deciding at that time what shall be used for the following three meals, being careful not to get any one article too often on their menus and at the same time trying to use anything of which there happens to be a large supply, in this way never overstocking and reducing waste to a minimum. Deliveries are made promptly after goods are put up and are stored in the smaller coolers and grocery space provided in connection with each kitchen.

Particular attention is paid to cleanliness and all storerooms and coolers are given a thorough cleaning and over-hauling twice a week; temperatures are watched very closely and are never allowed to vary to any great extent. Meat coolers are kept from 36° to 38°, eggs 40°, fish 28° to 30° and butter 34°. The temperature may be controlled down to 24° by means of extra pipes packed with ice and salt, making it possible to keep a large supply of meats and poultry indefinitely.

CONSTRUCTION OF COOLER AT LAKE PLACID CLUB

SIDNEY L. WOOD

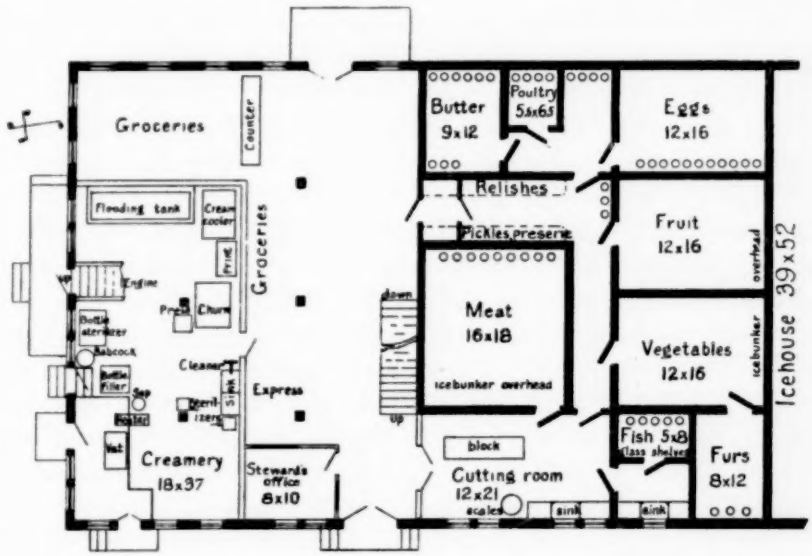
Supervising Engineer

The store cooler and ice house are side by side in a building 52 x 117, the 3 equal sections being each 39 x 52. The building is of frame construction, resting on a stone foundation. There is a cellar under the cooler but not under the other sections.

The insulation of walls, partitions, floors and ceiling in the cooler and ice house is effected by subdividing the thickness of these members into a large number of small air spaces. No asbestos felt, mineral wool or other non-conducting material is used in any part of this

building which now stores for 1500 people including employes and has ample capacity for 2000.

The construction of the outside walls is typical of the rest. On the outside of the studs (vertical members) is nailed the siding which in turn receives the shingles which form the outside finish of the building. On the inside of the siding, a strip of paper is fitted between each pair of studs. This paper is exceedingly tough and non-absorbent (C. S. Garrett & Sons, Phila., # 16). It is secured in place by long cleats nailed to the studs, the paper being turned up on each edge to go under the cleats and to secure a good joint. On the cleats are nailed short pieces



of board fitting tightly to the studs and to one another (ship lap). A complete air space is thus formed. A second strip of paper is fitted over these short pieces of board. A second set of cleats and a second set of short boards are also fitted, so that a second air space is formed.

This construction may be followed to produce any desired number of air spaces, six being used in interior partitions and seven for outside, including shingles. When the full depth of the studs is reached, the short pieces of boards are replaced by long lengths running over the inner face of the studs. Long lengths of the same paper are secured to this surface by cleats to which cleats another thickness of boards may be nailed, thus producing another air space. The verti-

cal extent of the air spaces may be limited by fitting horizontal strips wherever desired. Precisely the same method of construction is followed for interior partitions and for floors and ceilings.

Above the meat room and the fruit and vegetable rooms are fitted large ice bunkers in which perfectly clean ice is stored approximately 11 feet high. On each end of the ice bunker the partition is directly above the partition of the cooled room below; but on each *side* of the ice bunker a passage is formed for the air to circulate, the cold air down on one side and the warm air up on the other. On the warm air side, an insulated partition protects the ice from the rising warm air.

The space between the ceiling of the room below and the floor of the ice bunker is carefully insulated in the manner above described—as is also the ceiling over the ice bunker.

The floor of the ice bunker is inclined and is covered with a water tight pan which collects the water from the melting ice. Appropriate drainage is arranged to free the pan from this water. The size of these bunkers is such that it is generally necessary to fill them only twice a year, once in the winter when the year's supply of ice is stored, and once again in the summer, usually in August.

In addition to the ice bunkers some of the rooms are fitted with galvanized iron tubes, 10 inches diameter for holding a mixture of ice and salt. These tubes extend from the floor of the room to be cooled, through its ceiling where the upper ends are accessible in a room convenient to a large ice smashing tank from which the tubes are filled. Drainage from the bottom of these tubes is provided.

The temperature of any room is very easily controlled by the proper use of these tubes.

The store proper has, of course, no insulation, and it presents no feature of special interest. The first floor is the receiving and distributing point for all food supplies; that is, raw material; and on the second floor storage is provided for many supplies other than food.

The creamery is included in one corner of this store building and is fitted with appliances as indicated on the plan. To this creamery all the milk from the club dairy herds is brought for separation, bottling and distribution.

FOOD COST ACCOUNTING AT LAKE PLACID CLUB

OLIVE M. COSBY

Accountant

In the system used at Lake Placid Club, there are three main steps: calculating food used, counting guest days, and figuring the per capita. Each of the first two steps may be elaborated or simplified to suit the needs of the particular institution. We have six kitchens, each with its own table director buying from our own store, the latter being managed by the steward. Every kitchen has a requisition sheet, the color of which is significant to the initial letter of the name of its clubhouse, as lemon color for Lakeside, orange for Overlook, etc. After many years of experimenting, the division of foods into the following groups has been found most satisfactory, ranging from proteins and fats to carbohydrates: meat, poultry, fish, eggs, milk, cream, butter, fruit, vegetables and groceries.

Food used. The prices and the extensions are verified, each group of items being placed under its corresponding column and line on a sheet called *Steward's daily report.* At the end of one day we not only have the total sold to each kitchen, but also the total sold to each of the ten groups of food.

From the Steward's report is made the *Food used* sheet, containing the same ten columns, each kitchen having a separate sheet for each month. This sheet is divided into three ten-day periods, thus enabling the per capita to be reckoned each ten days of the month, 10th, 20th, 30th. The first line contains the amount on hand of each group followed by ten lines of food bought the first ten days, then a line for the total of these. In order to estimate the actual amount of food used, the kitchen inventory is taken every ten days.

Guest days. Each dining room sends in a meal count sheet recording each grade of meal served: guests $\frac{3}{3}$, children, maids and staff $\frac{2}{3}$, servants in side hall $\frac{1}{3}$. At end of ten day period the guest meal count may be converted into guest days. The actual meal count may be converted into guest days by proportioning each grade into guest meals, and dividing by three (three meals to one day).

Per capita. Dividing the total food used by the total guest days the ten-day per capita is reached. Each of the ten-day totals of the ten groups may be figured in this manner, their sum equaling the total per capita each month. The monthly per capita is figured not by

averaging the three ten-day periods, but by dividing the monthly total food used by the monthly total of guest days.

These per capitas may be transposed in many ways for convenient comparison with previous months or the same period in previous years. After calculating the club per capita (by totaling the several kitchens) a graphic sheet may be made. Each food line has a characteristic color, as meat red, vegetables green, butter yellow, etc.; thus a chart of peaks or curves by ten-day periods may appeal to the eye of an uneducated chef when figures are meaningless.

THE GRADING AND STANDARDIZING OF FOOD SUPPLIES

F. S. SNYDER

President, Batcheller and Snyder Company, Boston, Mass.

The grading and standardizing of food supplies is a very extensive subject. A few years ago it appeared that no study had been made in this country covering the subject of purchasing supplies of a variable nature. For example, even the two sides of a beef are not alike, nor of the same value. If the two sides of the same animal are different, and no two animals are alike, the infinite variety that must be covered in the question can be seen at once. A new era is dawning in the matter of meat food supplies for the United States. It was only a few years ago that this country was exporting large quantities of beef and other foods to Europe; it controlled the market in England; but seven years ago the tide began to turn and about four years ago American meats were completely driven out of the English markets by the meats from Australia, New Zealand, and Argentine. The changes in the tariff have turned the tide still further and some meats have been brought into this country through the eastern ports and have been shipped as far west as Kansas City. This portends something of very extreme and serious consequence. The changes in values in the last decade have been very great, and they are bound to be still greater. With the increased cost, the question becomes of very much greater importance than at any previous time, because if the waste percentage was worth, say the unit of $1, and today that same value of meat is twice as great, of course the waste becomes of twice as much importance. Armour and Company closed up forty-three branch houses in the year 1913 because they did not have sufficient stock

purchased in this country to utilize them. The pressure of demand for the distribution of the produce was such that they needed to do this. Now there is insufficient supply even with the packing houses running. Therefore their cost of distribution is increasing and their over-head charges are becoming serious. The importation of this foreign meat is looked forward to with a good deal of satisfaction. Some persons from Argentine report that unless their country increases its supply, we shall make such demand on it that the prices will increase. Today the people of this country are enjoying a reduced price based upon the coming in of the foreign meat. The great bulk of the foreign meat is chilled, that is, it has been kept at a temperature slightly below the freezing point. If meat is frozen, the cells are expanded and become unnaturally red. Not everyone is familiar with the appearance of thawed meat, or with the character of the change that takes place, particularly in red meat. The aging process cannot be carried on in just the same fashion. Do your thawing out in your own refrigerators, because in that way you will avoid this chance for souring which is the natural and ordinary process of the development of frozen meats.

Lamb is being imported as well as beef, and shipments have been received from New Zealand, and Australia. Lamb has sold for seventeen cents per pound. This is a high price compared to the price of the lamb raised in the country, but this imported meat is said to be finer in quality. The second grade of this meat is worth about twelve cents per pound delivered at Boston.

Beef, lamb and veal may be divided into four general classes. Beef perhaps is of greatest importance in the matter of its uses. Let us consider the very concrete problems that relate to buying. In comparing two steers after dressing, one weighing seven hundred pounds, the other a thousand pounds, we find a very slight difference in the length of the animals but a great difference in the thickness. It is easy to see what that means with reference to the use of the sirloins, ribs or other cuts of meats where a surface cut of a given shape or size is being used. Sirloins are classified as "suet in," "suet out," and "Frenched," the latter meaning that the suet is removed and the flank removed. The weights of the Frenched sirloins from these two steers are almost precisely the same. The difference in the total weight is due to feeding and the difference in the feeding is registered in the suet so that if the suet is removed from these sirloins they have almost

precisely the same weight. With the difference in inches there is a difference of but about ten per cent, but in serving sections from this large loin there is a loss of at least thirty per cent. The importance of choosing the size of the sirloins is evident, and unless three sections are cut from a slice there would be given away a service which would mean a loss of at least thirty per cent in the cost. That principle also applies to the ribs. Comparing the twenty to twenty-four pound rib with the thirty to thirty-four pound rib, a difference of fifty per cent in weight shows a difference in length of but three-quarters of an inch. The difference in the first and second sizes is only two per cent in length, but twenty per cent in weight, so that the difference of eighteen per cent is a pure surface loss. This surface loss can be avoided by choosing proper sizes, as between the twenty to twenty-four and the thirty to thirty-four there is a difference of but seven per cent in length, and a fifty per cent in weight. The same principle applies in the purchase of lamb and lamb racks. Racks are quoted at this particular time of the year at five different prices. You have the eight to nine pound size which is under normal; the ten to eleven pound size in the normal range; the twelve to thirteen and the fourteen to fifteen. There is a difference here of about ten per cent in weight, and a difference in accurate usage and cost that is much greater. The first rack costs $1.88; the next $3.68. You serve precisely the same number of people from any one of these. Again you choose as to how many you will serve. If you are serving two chops, the importance of choosing a size of the sort that will make a difference of ten to forty per cent in the cost is of paramount importance. It is not what you pay per pound, but the size which fits your need and, what is of equal importance, the cut of the particular thing you are buying plus, of course, the general question of quality. Anyone handling meats becomes at least familiar with general quality, but the question of cut is infinitely more important than the question of price per pound. In purchasing lamb, find the size chops that you want, and remember also that the rack is one-third the weight of the lamb.

Further, in consideration of beef cuts we have what are called economy cuts of beef. This is an outgrowth of a practice in the West. The idea was to take fine cattle and make boneless cuts. A careful experiment was made by us in the use of these economy cuts with the result, in one institution trying them, that their cost had been reduced exactly one half, because they had been making the daily

mistake of purchasing a large percentage of beef which was too good for their use, and they were purchasing another percentage of beef which was entirely too poor. In this great institution with its staff of officers, they were using a great many sirloins which they did not have to use. On the other hand they were getting parts of the rounds of beef, an extra amount of bone and things of that sort. It was vastly better for them to buy bones at bone prices, but by purchasing a limited amount of sirloin for their officers' use, they found that no one had extravagantly good meat and no one had poor meat. It is the right selection of the particular thing for the particular need that should be studied. Go to some of the butchers and require that they serve you with the thing that fits your case. A few years ago Harvard was using rump steak, and was having a large amount of waste. When I suggested that they change to sirloin steak, the new steward held up his hands in horror, saying that they could not afford to. I showed him that they could not afford not to.

Passing on to sweetbreads we make seven groups. The chef can take a large sweetbread and cut it into seven pieces so that they fit any need that can occur in any well regulated kitchen. Lamb sweetbreads are almost precisely the same as beef sweetbreads in texture and flavor, and the cost is only one-third. Generally speaking, they are indistinguishable so far as the flavor is concerned.

Packers use two systems of curing—the dry and the wet. Take, for example, one hundred pounds of green meats, and by the dry system they can turn out eighty-five pounds of finished product, while by the other system they can turn out one hundred to one hundred and two pounds, so that in buying the finished product you are getting fifteen to seventeen pounds of water in one case. Of course, in the cooking a large share of that extra amount of water is evaporated. There is no way of knowing which kind you buy unless you cook two types and compare the cooked product with the original product.

Another thing which the government has not taken up seriously is the question of the excessive use of saltpeter. In New York and further west they use very largely the red corn beef. The excessive use of saltpeter is undesirable. The use of saltpeter and salt or any form of curing process is a modified form of tanning. We cure leather to make it tough; in curing ham and bacon we get the same results. The ordinary method of curing heavily with salt and saltpeter and then soaking is a common practice. Perhaps they could not do dif-

ferently in extremely large plants, but they need not go to the extent to which they do in some plants. Saltpeter is more serious in its effect than salt, but either an excess of salt or saltpeter during the process of curing, produces a less desirable meat from the standpoint of food use. Therefore avoid any meats that have an excessively high color.

In using olives where you want both quantity and quality get the very largest size of olives that is possible. A pound of large olives will contain less than one-half the pit waste found in the finest queen olives. Another illustration of extravagance is the use of oils. There is a great protest in many sections against using any of the neutral oils. There is no reason why certain of the refined oils that are now made from grain, cotton seed, and peanuts are not entirely wholesome, and you will find that as compared with the olive oils, from Spain especially, these oils are better and cost about one-third as much. Buy the finest French or Italian oils and mix with cotton seed oil, and you will find your working qualities much better. The French oils are heavier and a little richer, and do not blend quite as readily as the Italian. The average American prefers the French oil.

In a certain institution they are paying ten and one-half cents for certified milk, and thirty-six cents per pound for butter. In a forty quart standard can that weighs eighty-two pounds, forty quarts at ten and a half cents would cost $4.20. If it contained a four per cent standard of butter fat that would make 3.28 pounds of butter fat in the can of milk; at twenty per cent surplus for the casein and the water content that will be incorporated in making it into butter, it would produce 3.93 pounds of butter. So that amount of butter multiplied by the price per pound would be $1.41. That is, the cost of the milk was $4.20 to turn into butter, and the butter would cost $1.41 made from the same milk. In other words, they are paying a dollar a pound for the butter that is in that milk. The usual practice is to get an unnecessary price for cream. It is something that is being used more every year, and what has been equally remarkable is that the cost of cream has been maintained in the market. There is not a sufficient justification for it. Cream can be shipped from northern Vermont to Boston, and if there is any surplus it can be turned into butter. There is no reason why cream should bring the high price that it does. It is simply trade practice.

LAKE PLACID REPORTS AND INSTITUTION PAPERS

Those who wish the papers that have been given at Lake Placid Conference and at meetings of the Institution Economics Section at Lake Placid and elsewhere may obtain them from the office of the American Home Economics Association, Station N, Baltimore, Maryland, at the prices quoted.

The following is a list of reports and JOURNALS containing the papers referred to above. A few of the important subjects are given for each.

LAKE PLACID CONFERENCE PROCEEDINGS

*1899–1901—History and outline of first conference, Suggestions for professional school of Home Economics, Courses in Home Economics for elementary and secondary schools and colleges..... $2.00

1902—Industrial institutes, Social conditions and family life, Courses in Home Economics..... 1.00

1903—Personal hygiene, Manual training, Relation of Home Economics to other studies, Labor problem in the home..... 2.00

*1904—Household labor, Cost of living for family and for large numbers, Standards of wages, Personal hygiene..... 2.00

1905—Teaching Home Economics, College and university education in Home Economics, The food problem, Household industrial problem..... 0.50

1906—Euthenics in education, Progress in teaching Home Economics, Food and nutrition, Public health..... 1.00

1907—Woman's public work for the home, University work in textiles, Essentials of coöperation..... 0.50

1908—Hygiene and sanitation, Requirements of the modern house, Study of textiles, The school lunch room..... 0.50

Papers from the administration section June, 1912—Laundry, school lunch, accounting systems, diet..... 0.50

JOURNALS

Vol. 11, No. 5 (Institution number)—Institutional management, Administration of dormitories, Organization and control of institutions, Accounting, Laundry..... 0.50

Vol. IV, No. 1—Equipment of kitchens and dining rooms, Insect pests in institutions, Scientific management, Purchasing and handling supplies..... 0.25

* Those marked with a * are so nearly out of print that they can be sold only in orders for a complete file of the reports. 1901 can be furnished by itself for $1 and contains most of what is found in 1899–1901.

Vol. IV, No. 4—Marketing facilities, School lunches, Laundry, Institutional management.....$0.25
Vol. IV, No. 5—Dietaries, Diet kitchen, Public utilities, Uniform and waste accounting..... 0.25
Vol. V, No. 1—Commercial laundries, Penny lunches, Café in men's clubs..... 0.25
Vol. V, No. 5—Standards of living, Organization and rewards, School dietitian..... 0.25
Vol. VI, No. 4—Laundry, Lunch room supplies..... 0.50

EDITORIALS

Institution Economics Section Meeting. The Institution Section of the American Home Economics Association will hold its annual meeting at the Lake Placid Club, Essex County, N. Y., from June 26 to 30, 1915.

The program of each day will consist of a morning and an evening session devoted to the discussion of problems of administration. The cafeteria, the school lunch-room, the hotel, and the school and college dormitory will be represented, and contributions will be made from the experience of the Young Women's Christian Associations, coöperative housekeeping for student groups, lodging-houses for working women, and state institutions. Two sessions will be given to the study of housing problems affecting the women workers in our cities. Consideration of the field assigned to the dietitian of today will occupy one session, and the practical experience of hotel managers, per capita costs in various institutions, service, equipment, and the buying of supplies will be fully discussed.

Ample provision for group conferences will be made, in which the specific interests of the various types of institutions may be considered.

If you are interested in any institution or if you are teaching Home Economics, you should avail yourself of the advantages offered by this meeting.

Chairman, Institution Economics Section. In 1913 Miss Sarah Louise Arnold resigned from the chairmanship of the Institution Section of the American Home Economics Association in view of more responsible duties placed upon her as president of the American Home Economics Association. Miss Martha Van Rensselaer was elected chairman of the Institution Section in Miss Arnold's place. At the Cleveland meeting in the summer of 1914 Miss Arnold declined reelection to the presidency of the American Home Economics Association, and Miss Van Rensselaer was elected president. Accordingly a reversal of the original plan took place and Miss Van Rensselaer resigned as chairman of the section and Miss Arnold was again elected chairman.

HOUSEKEEPERS DEPARTMENT

WHAT THE HOUSEHOLD HAS LEARNED FROM INSTITUTION METHODS

Our debt is great and promises to be greater as we learn more of these methods and test and apply them to the every day use of the smaller group. The institution is but the larger household and in reaching conclusions as to the efficiency of methods in all of the lines of household management it has certain advantages that insure for it leadership.

On the financial side. The household has been a law unto itself. Its manager has other functions besides that of house management and they are important ones, of great social and educational value. They may even obscure in her mind the importance of time and training which should go to the practical running of her household. She is responsible to her husband only and he may or may not be a good critic of the efficiency of her methods. On the other hand, the head of an institution is first and foremost a thinker and a worker along these lines and responsible to a board of managers who in turn are responsible to the public for the use of funds. The methods in use must be the best attainable, they must have passed criticism and comparison with those of other institutions. Their results are not hidden, they are constantly in evidence on the pages of the account books. From the institution we have thus learned the absolute necessity of keeping accounts in order to know whether we are spending our income with economy. Imagine the matron of a hospital facing her Board with this statement found very amusing in a young housekeeper, "When the housekeeping money is gone, why it's gone and that's all there is of it—we have to live on mush till the first of the month." In times of business depression, the certified public accountant reports that he is busier than ever. A business man wants to know whether his methods can be improved and calls in the accountant to look over his books.

Hours of labor. The institution must have an exact understanding with its employes as to hours of labor. Those hours may be 8, 9, or

10 a day, but they begin and end on the minute, a system so agreeable to the worker that the housekeeper finds to her amazement that many a girl prefers hard work in a hotel to the easier work extending over uncertain hours in a private house. Will these industrial competitors force us to shorten and make definite the hours of work in the household even though it may necessitate our getting the family breakfast ourselves?

System in buying. A woman who served on the board of a child's asylum found that all purchases are made by institutions at wholesale by the system of samples and by competitive bids; the competing firms submit their samples of food, clothing, blankets, and other house furnishings to the buying committee. These samples are carefully tested; for instance, a decoction of the samples of coffee is tested by a number of people. When the orders are filled, the foods must come up to the sample as to quality and be of the guaranteed weight or they are returned. In comparison the household system of buying seems a very poor one. The great difference between the wholesale and retail price paid by the household ought to guarantee besides delivery of goods in small quantities exactness as to weight and quality, but does it?

Test of utensils, house furnishings, etc. It was the institution which started the use of bare floors with rugs, and brought about the use of the concave joining of mopboard and floor and the filled-in corner, all for hygienic reasons, and slowly the household has followed suit. The tiled bathroom was first approved by the hospital and it is the hospital that has made experiments to determine the best floor covering.

Laundry. Only in the large institutional laundry is there an opportunity to test out laundry methods and machinery. Few housekeepers, for instance, could duplicate the following test: In a certain hospital 12 collars were given out to each nurse and expected to last for a year, but when the laundry was changed to one using destructive chemicals, these 12 collars were worn out in three months.

The laundry departments in our schools of household arts, starting with appliances and methods suited to the institution, have worked out what can be used in the individual home.

A RARE BOARDING HOUSE

ELLA KAISER CARRUTH

Situated in the midst of a choice residence section of one of our largest cities near a thriving university is a boarding house which is unique.

The problem of serving good, homelike, abundant meals at a figure lower than similar meals could be served at a private home has been solved. For a family of three whom boarding relieves of the necessity of employing a maid, the following is a roughly estimated comparison of prices for the same meals for one week at home and in the boarding house.

Cost in the home

Cost of food	$15.00
Cost of fuel	.50
Maid's service	2.50
Maid's waste	.70
Laundry of table linen	.35
Total	$19.05
Cost of boarding for three	18.00
Balance per week in favor of boarding	$ 1.05

To the cost in the home should in reality be added the wear and tear of equipment and the time given to oversight by the housekeeper.

At this boarding house no pretence of giving meals at an absurdly low price is made although the following price list indicates rates from a dollar to a dollar and a half less a week than prevail in other boarding houses setting similar tables, in the same section of the city.

Board per Week

Three meals per day	$6.00
Two meals per day	5.00
Dinners only	4.50

Reductions made only for absence of one week or more.

Single Meals or Guests

Breakfast	$ .50
Luncheon	.35
Dinner, weekdays	.75
Dinner, Sundays	1.00

No supper is served on Sunday or holiday evenings.

The better to appreciate the spirit and atmosphere of this boarding house home, which mean so much to the patrons, a glance at its history and surroundings may be of interest before examining its machinery. Nearly a century ago the grandfather of the present owner bought a farm far out from a struggling village in the middle west. As recently as fifteen years ago his acres were on the very outskirts of the city. But now the farm has been pierced by city streets. Much of the land has passed out of the hands of the family but a choice and very deep corner lot still remains on which a large and comfortable home was built about thirty years ago. Well back from the street it stands, surrounded on all sides by expansive lawns and sheltering trees.

Some ten or twelve years ago, the owner allowed ten or fifteen people to room in the house. Rather reluctantly she also arranged to board them. The board was superior, the location ideal, the hostess charming and personally acquainted with and interested in her guests. The refined atmosphere of the place made it a haven of delight to the privileged few.

Presently another house was required to accommodate even a part of the people who were clamoring for admission. And they were just the kind of people for whom the owner wanted to provide a home—young professional and business men and women of moderate income accustomed to culture and refinement and unostentatious living.

The fame of this home spread, and more people wanted to come. If circumstances had necessitated the giving up of their own home, where could a family live better, than here where they could enjoy the privacy of a table of their own?

Then the barn was made into a delightful little cottage. Two or three houses were converted into rooming houses for the boarders. A three story brick apartment house, having two and three room suites was built on part of the garden. All the suites were engaged before the roof was on. And now some facetious boarder has said, "Only death or marriage leaves one vacant." Prices for suites in this building are: $25 per month for two rooms and bath; $30 for two larger and front rooms and bath; $35 for three rooms and bath. All tenants pay their own light bills, and many of them supply their own furniture.

The present seating capacity of the dining room is one hundred and

twenty-five. This one hundred and twenty-five includes an interesting lot of people. Teachers of all kinds, from kindergartners to college professors; "More kinds of librarians than I knew existed" some one said; business men and professional men of the bachelor persuasion and men of families. To some elderly ladies left practically alone this happy, congenial home seems more of a boon than to almost anyone else.

The service in the dining room is all rendered by students from the neighboring university, who wait on the table in return for their board. They do their work quickly, quietly, politely and efficiently. By using the card-index system, the head waiter keeps track of the absence of regular boarders and of the number of guests they entertain. The price of all guests' meals is added to the proper bills.

The other waiters so systemize the work that no time is wasted and yet there is no feeling of haste. Since one waiter has charge of the soup and the drink (tea, coffee or milk) and another of the main course and dessert, two waiters can serve several tables. And only ten waiters are ordinarily required in the dining room.

The color scheme of the dining room is green and white from dishes to wall paper, and is very restful. The table linen, always changed three times a week and oftener if an accident occurs, is as fine as is consistent with durability, and is always well laundered. The silver is always bright, the salt cellars always full and *flowing*, the water cold and the cream yellow.

The following menus, selected at random, are typical of the meals served:

WEEK DAY MEALS

BREAKFAST

Fruit
Cereal Cream
Creamed chipped beef Brown potatoes Graham muffins Toast
Coffee Postum Milk

LUNCHEON

Minced chicken in gravy on toast Candied sweet potatoes
Succotash Rolls
Chocolate pudding Sliced peaches Cake
Tea (hot or ice) Milk Cocoa Postum

DINNER

Chicken broth

Roast beef Mashed potatoes Tomatoes Mashed squash

Tea Coffee Milk

Apple pudding and hard sauce

SUNDAY DINNER

Cream tomato soup

Fricasseed chicken Sweet potatoes Succotash Cucumbers

Tomato salad, French dressing Ice cream and cake

Coffee Tea Milk

Few choices are given, but well balanced palatable meals are prepared in the kitchen. Eggs may always be substituted for meat and an orange for the dessert. On Friday there is always a choice between meat and fish.

The genius who plans the meals and does a large part of the marketing is a capable, cultured woman. She buys the best of everything. She, with the hostess and another charming woman who keeps the books, make up what might be called the Executive Board of the establishment. Under their direction the cooks, the maids, the butler, the gardener, all do their work.

An old black cook, the backbone of the establishment, presides over the kitchen. Although all her cooking is unusually good, she excels especially in the preparation of vegetables.

The four or five maids help in the kitchen, do what laundry work is done in the house (and this includes all the table linen), wash the dishes and care for the rooms of the bachelors. The women tenants provide for the care of their own rooms—they are not as yet wholly emancipated.

No expense is spared in equipping each department with the really labor saving devices. During the past summer an iceless refrigerator plant was installed. Vacuum cleaner, washing machine, mangle, and dish washing machine have all been installed as rapidly as they were perfected.

The very marked success of this boarding house is due primarily to the unusual personality of its hostess. Still the financial success of an institution can hardly be attributed to so elusive a thing as a personality. The question still arises, what makes it possible to provide such excellent fare for so reasonable a price. The answer is six fold:

1. In common with all boarding houses a large part of the profit must come from the renting of rooms. The practice of having practically all the tenants furnish and care for their own rooms adds materially to this profit.

2. Again, in common with all large boarding houses, is the opportunity for saving which comes from buying in large quantities.

3. No wages are paid to the waiters. They are given only their board.

4. The owner has an ability amounting almost to genius for finding just the right person for each bit of work.

5. The number of servants employed is greatly lessened by the installment of practical labor saving devices.

6. The boarders are given very few choices in their meals.

A MODEL WET-WASH LAUNDRY

The small house or apartment has seldom any proper facilities for doing the family laundry. In a canvass of two blocks in the East Side District of New York it was found that in one of them 40 per cent and in another 59 per cent of the families were without wash tubs. Great relief has been afforded by the municipal wash houses, fifteen of which have been established in the last few years in connection with the public baths in our large cities. Here the man or woman may do a family or a personal washing and ironing at cost price, by the use of a simple and inexpensive outfit.

But a great advance on this method would be the general establishment of wet-wash laundries where work may be done by machinery at cost price. Under the direction of The Association for Improving the Condition of the Poor, such a one has been in operation in connection with the Milbank Bath in New York since the middle of November last. It uses a washer of eight compartments, each compartment holding a family washing in its own bag. For 25 cents, 30 pounds of clothing are washed and partially dried, and returned the same day within a radius of 6–8 blocks for an extra charge of 10 cents, or the family may bring the washing and call for it. At present the number of family washings done per week averages 275.

If this method of public service proves to be a success, as seems probable, we may expect the municipal wash house to extend its scope or to improve the methods and lower the prices of the commercial wet-wash laundry.

COMPARISON OF THE COST OF HOMEMADE AND BAKERS' BREAD

The following conclusions are taken by permission from the published report of an experiment conducted by the Boston Branch of the Association of Collegiate Alumnae and the School of Housekeeping of Boston.

The work was done fifteen years ago and certain adjustments as to prices and conditions are necessary to make it of practical value today. But the results should be carefully preserved, as the work was done with the utmost accuracy and care under a fellowship established by the Collegiate Alumnae at the School of Housekeeping, in 1900.

To compare the cost of food cooked out of the house with that of food prepared at home, the following data must be obtained in regard to home-cooked food: cost of materials, cost of labor, cost of fuel, cost of wear and tear on equipment and of waste.

Cost of Materials. This is the simplest of the four problems involved and can be determined with comparative accuracy. The prices used in the following experiments are retail prices of the better-class dealers in Boston.

Cost of Labor. This is an item extremely complex, first because there exists as yet no standard of the value per hour of labor in housework, and, second, because of the difficulty of determining the exact amount of time required to prepare any one article of food, since in practice, the person cooking usually does not give her undivided time to the preparation of this one article, but is cooking other things at the same time, with a consequent economy in time. The price adopted was 8½ cents an hour, based on a wage of $4 a week.

Cost of Fuel. In the absence of obtainable data on the comparative cost of different fuels, an approximate estimate of the cost was found by using, as a standard, coal at $6.25 a ton, coal oil at 15 cents a gallon and gas at $1 per thousand cubic feet. At these prices, oil cost 4.58 per cent, and gas 27.69 per cent, more than coal.

Cost of wear and tear on equipment and of waste was omitted from the calculation as it was found impossible to arrive at any satisfactory estimate.

It is significant of the lack of business management in housekeeping, that no house manager was found who could give an accurate statement of the cost of wear and tear and waste. The fact that these items must be disregarded in the present investigation, because of lack of data, is indicative of the present unorganized condition of house-management.

RESULTS

The average cost of producing one pound of bread, including the cost of materials, fuel, and labor, is 5.865 cents. The cost of one pound not including labor is 3.72 cents. The cost of one pound not including either labor or fuel, but simply the cost of materials, is 2.942 cents.

The cost of a pound (not loaf) of bakers' bread is 5.55 cents.

CONCLUSIONS

The cost of bakers' and home made bread does not differ materially when the housekeeper counts labor and fuel in estimating the cost of making the bread at home. But when the fuel would be burned in any case, and the heat is available for baking bread without extra expense, that item should hardly be counted in the cost. Again, when labor is hired by the week, as in the case of the cook or general houseworker, the time of the worker is available for bread making, and does not mean a loss of time which could be more profitably employed. Hence, the item for labor may in these cases be eliminated. Taking out the cost of both labor and fuel, only the cost of materials remains. This averages 2.942 cents per pound of bread, and may be reduced to about two cents. Under these conditions it would evidently be much cheaper to make bread at home.

On the other hand, in cases where the housekeeper's aim is to put out of the house as much work as possible, the reduction of service secured by buying the bread might prove an important element in reducing the expense for labor. Provided a satisfactory article can be secured it would probably be economical to buy it ready made.

SELECTING ECONOMICAL FOODS

The housekeeper who wonders at every rise in the price of meat, will find an explanation with many other important points as to the cost of food, in the paper by Mr. F. S. Snyder, in another part of the JOURNAL. The article is full of information that very rarely finds its way to the housekeeper.